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ABSTRACT

This profile provides the curricular framework for Ohio Tech Prep programs in e-commerce marketing beginning in high school and continuing through the end of the associate degree. It includes a comprehensive set of e-commerce marketing competencies that reflect job opportunities and skills required for e-commerce marketing professionals today and in the future. Introductory materials include an occupational area definition; key to profile codes; and state competency profile matrix. Competencies are divided into 31 units. This information is provided for each competency: whether business, industry, and labor determine the competency to be essential or recommended; grade level(s) at which technical educators feel the competency should be introduced, reinforced, or proficient; the competency number and statement; and list of competency builders. Units are e-commerce basics; marketing and business basics; economic concepts and international business; information technology basics; computer applications; Internet; programming; networking; information security; graphic design basics; digital media design; Web page design; personalization; electronic payment systems; promotion; consumer behavior; branding; integrated business systems; supply chain management; pricing; product management; customer relationship management; market research; data mining; data warehousing; marketing management; business management and entrepreneurship; financial management functions; e-commerce/business law, ethics, and legal issues; writing and documentation for marketing; and digital marketplace design. (YLB)

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E-COMMERCE

E-Commerce Marketing

State Competency Profile

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the Ohio Board of Regents

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E-COMMERCE

E-Commerce Marketing

State Competency Profile

Tech Prep Curriculum Services
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the Ohio Department of Education
and
the Ohio Board of Regents

INTRODUCTION

The E-Commerce Marketing State Competency Profile was developed by Tech Prep Curriculum Services under the direction of the Ohio Department of Education and the Ohio Board of Regents. It provides the curricular framework for Ohio Tech Prep programs in E-Commerce Marketing beginning in high school and continuing through the end of the associate degree. The profile includes a comprehensive set of E-Commerce marketing competencies that reflect job opportunities and skills required for E-Commerce marketing professionals today and in the future.

The profile will be used as the basis for the development of an integrated delivery system that provides opportunities for new and challenging programs and courses in Ohio's secondary schools and colleges. Representatives from a broad cross-section of Ohio businesses and industries played a critical role in this effort by defining the vision and scope of E-Commerce marketing, and by identifying the essential and recommended skills for current and future E-Commerce marketing professionals. Secondary and post-secondary educators representing schools and colleges throughout Ohio identified when in the educational process and to what depth those skills identified by business should be addressed.

This profile is available on the Internet at: www.ohtpcs.org At this location, users can download copies of the entire profile or conduct searches on a number of key variables.

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E-COMMERCE MARKETING TECHNOLOGY PROFILE REVIEW PANELS

E-COMMERCE PRE-FUTURING PANEL
December 2, 1999

Purpose: To provide information on the vision and scope of E-Commerce-related jobs

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E-COMMERCE DACUM PANEL
February 8-9, 2000

Purpose: To provide information on the nature of E-Commerce-related jobs and job skills

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E-COMMERCE FUTURING PANEL
February 29, 2000

Purpose: To define the vision and scope of E-Commerce and identify critical occupational areas

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E-COMMERCE MARKETING BUSINESS AND INDUSTRY REVIEW PANEL
April 26, 2000

Purpose: To identify essential and recommended skills for information technology professionals

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E-COMMERCE MARKETING EDUCATOR REVIEW PANEL
May 10, 2000

Purpose: To identify when and to what depth essential and recommended E-Commerce skills should be addressed in the educational process

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May 16, 2000

Purpose:	To refine the Ohio E-Commerce Competency Profile through dialogue among all key stakeholders
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OCCUPATIONAL AREA DEFINITION

E-COMMERCE MARKETING

Students training in this area will have the skills and knowledge to develop and implement e-commerce marketing activities for businesses conducting transactions in an online environment. Technical skills and knowledge include, but are not limited to:

- digital graphic design
- e-commerce site design and strategy
- marketing management
- Customer Relationship Management (CRM)
- market research
- promotion
- sales
- online customer behavior
- branding
- business management
- data mining and warehousing
- online partnerships
- product packaging
- product mix
- basic business concepts
- pricing
- supply chain management
- financial management
- business systems
- security/privacy issues
- web site usability
- electronic data interchange (EDI)
- entrepreneurship
- global commerce/international e-commerce

KEY TO PROFILE CODES

Determined by Business, Industry and Labor Review Panel (BIL)

ESSENTIAL COMPETENCY:

E = Competency is needed to ensure **minimal** level of employability. Entry level employees should be able to perform this competency without supervision at the end of the associate degree. Competencies required for certification, licensure, and/or national skills standards should be tagged as essential.

RECOMMENDED COMPETENCY:

R = Competency should be included but is not essential for minimal level of employability.

Determined by Technical Educator Review Panel (EDU)

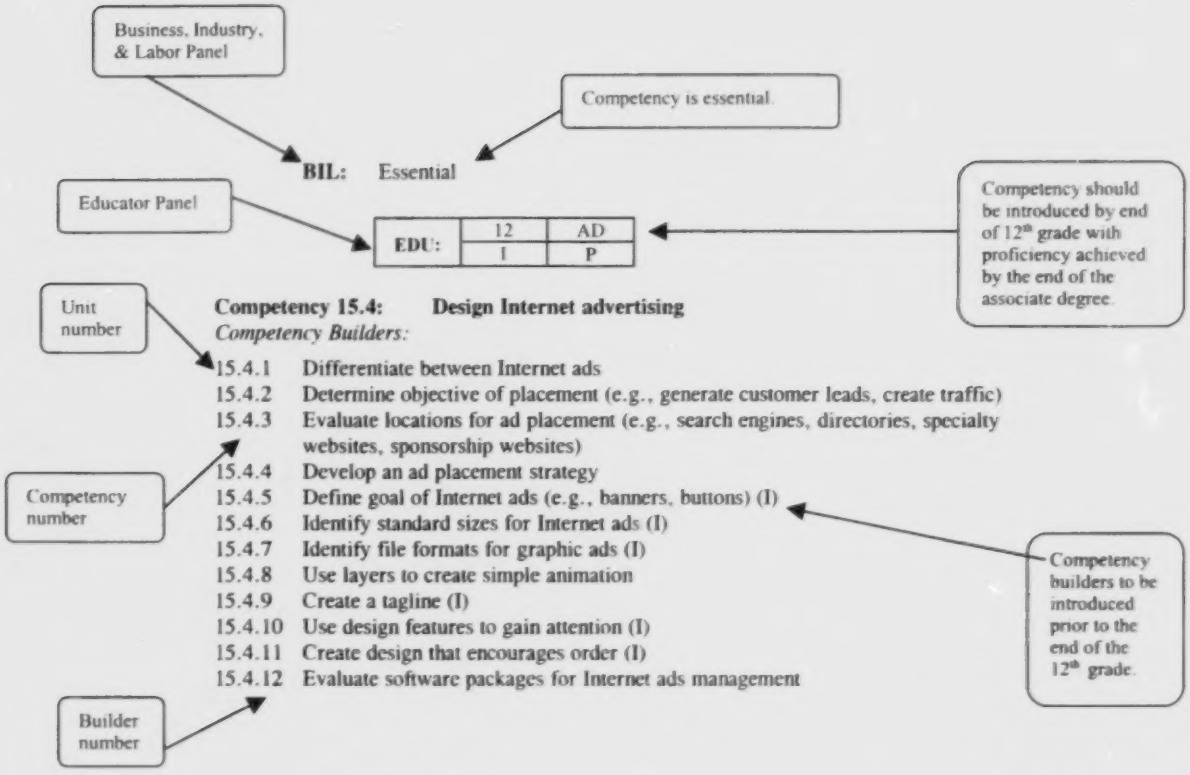
GRADE LEVEL:

12 = by the end of grade 12
AD = by the end of the Associate Degree

DEPTH:

I = **Introduce** (applies to 25% of the competency builders. In competencies with 3 or less builders, all builders should be introduced before this code can be used.)
R = **Reinforce** or add depth (after introducing or proficiency).
P = **Proficient** (achievement of the competency: e.g., 75% of competency builders **without** supervision).

EXAMPLE:


Business, Industry, & Labor Panel
Competency is essential.
BIL: Essential
Educator Panel
EDU: 12 AD I P
Competency should be introduced by end of 12th grade with proficiency achieved by the end of the associate degree.
Unit number
Competency 15.4: Design Internet advertising
Competency Builders:
15.4.1 Differentiate between Internet ads
15.4.2 Determine objective of placement (e.g., generate customer leads, create traffic)
15.4.3 Evaluate locations for ad placement (e.g., search engines, directories, specialty websites, sponsorship websites)
15.4.4 Develop an ad placement strategy
15.4.5 Define goal of Internet ads (e.g., banners, buttons) (I)
15.4.6 Identify standard sizes for Internet ads (I)
15.4.7 Identify file formats for graphic ads (I)
15.4.8 Use layers to create simple animation
15.4.9 Create a tagline (I)
15.4.10 Use design features to gain attention (I)
15.4.11 Create design that encourages order (I)
15.4.12 Evaluate software packages for Internet ads management
Competency number
Competency builders to be introduced prior to the end of the 12th grade.
Builder number

E-COMMERCE MARKETING STATE COMPETENCY PROFILE MATRIX

EC = E-Commerce Marketing

Page	Unit	UNIT	EC
1	1	E-Commerce Basics	E
5	2	Marketing and Business Basics	E
7	3	Economic Concepts and International Business	E
11	4	Information Technology Basics	E
13	5	Computer Applications	E
19	6	Internet	E
23	7	Programming	R
25	8	Networking	R
27	9	Information Security	E
29	10	Graphic Design Basics	E
33	11	Digital Media Design	E
37	12	Web Page Design	E
41	13	Personalization	E
43	14	Electronic Payment Systems	E
45	15	Promotion	E
57	16	Consumer Behavior	E
59	17	Branding	E
61	18	Integrated Business Systems	E
63	19	Supply Chain Management	E
67	20	Pricing	E
69	21	Product Management	E
73	22	Customer Relationship Management	E
77	23	Market Research	E
81	24	Data Mining	E
83	25	Data Warehousing	R
85	26	Marketing Management	E
89	27	Business Management and Entrepreneurship	E
93	28	Financial Management Functions	E
97	29	E-Commerce/Business Law, Ethics and Legal Issues	E
101	30	Writing and Documentation for Marketing	E
105	31	Digital Marketplace Design	E

E = Essential **R** = Recommended

Unit 1: E-Commerce Basics

BIL: Essential

EDU:	12	AD
	P	R

Competency 1.1: Explain basic e-commerce concepts

Competency Builders:

1.1.1 Define *e-commerce*
1.1.2 Describe the components of e-commerce (e.g., "front-end," "back-end")
1.1.3 Explain how e-commerce is similar to and different from traditional commerce
1.1.4 Explain the history and development of e-commerce
1.1.5 Discuss the global impact of e-commerce
1.1.6 Explain the scope of e-commerce and how it relates to business practices
1.1.7 Explain how e-commerce relates to e-business and e-terminology
1.1.8 Discuss the impact of wireless e-commerce
1.1.9 Discuss the impact of emerging technologies

BIL: Essential

EDU:	12	AD
	P	R

Competency 1.2: Explain business-to-consumer e-commerce

Competency Builders:

1.2.1 Define the scope of business-to-consumer e-commerce
1.2.2 Explain the benefits and risks of business-to-consumer e-commerce
1.2.3 Identify trends in business-to-consumer e-commerce
1.2.4 Identify security issues associated with business-to-consumer e-commerce
1.2.5 Identify privacy issues associated with business-to-consumer e-commerce
1.2.6 Identify the components of a business-to-consumer e-commerce site
1.2.7 Identify customer service issues and policies
1.2.8 Explain permission marketing (i.e., sell, share, or distribute personal information)

BIL: Essential

EDU:	12	AD
	P	R

Competency 1.3: Explain global business-to-business e-commerce

Competency Builders:

1.3.1 Define the scope of business-to-business e-commerce
1.3.2 Explain the benefits and risks of business-to-business e-commerce
1.3.3 Identify trends in business-to-business e-commerce
1.3.4 Identify security issues associated with business-to-business e-commerce
1.3.5 Identify privacy issues associated with business-to-business e-commerce
1.3.6 Identify the components of a business-to-business e-commerce site
1.3.7 Identify customer service policies and issues
1.3.8 Explain the legal contract issues of business to business e-commerce

BIL: Essential

EDU:	12	AD
	P	R

Competency 1.4: Explain consumer-to-consumer e-commerce

Competency Builders:

1.4.1 Define the scope of consumer-to-consumer e-commerce
1.4.2 Explain the benefits and risks of consumer-to-consumer e-commerce
1.4.3 Identify trends in consumer-to-consumer e-commerce
1.4.4 Identify security issues associated with consumer-to-consumer e-commerce
1.4.5 Identify privacy issues associated with consumer-to-consumer e-commerce
1.4.6 Identify the components of a consumer-to-consumer e-commerce site
1.4.7 Explain the legal issues in consumer-to-consumer e-commerce

BIL: Essential

EDU:	12	AD
	P	R

Competency 1.5: Identify career opportunities in e-commerce

Competency Builders:

1.5.1 Identify entry-level positions
1.5.2 Identify possible career pathways
1.5.3 Identify types of e-commerce positions and the nature of each
1.5.4 Identify present and future employment opportunities
1.5.5 Research job opportunities
1.5.6 Compare salary ranges and benefit packages
1.5.7 Identify education and training requirements for selected career pathway
1.5.8 Design a career ladder for own career in e-commerce (i.e., personal goal setting)
1.5.9 Design a time line for own career advancement
1.5.10 Explain possible career advancement patterns
1.5.11 Identify skills needed to facilitate career advancement
1.5.12 Identify professional organizations in the area of e-commerce
1.5.13 Identify benefits derived from membership in a specific professional organization

BIL: Essential

EDU:	12	AD
	I	P

Competency 1.6: Describe the impact of e-commerce on business and society

Competency Builders:

1.6.1 Explain how e-commerce affects business systems (e.g., financial, security, supply chain) (I)
1.6.2 Explain how e-commerce affects business-to-business relationships (e.g., shopping malls, brokers, partnerships) (I)
1.6.3 Describe the impact of e-commerce on user access to the global marketplace (I)
1.6.4 Describe the impact of e-commerce on the development of small businesses (I)
1.6.5 Describe the impact of e-commerce on the development of new products and services (e.g., live concerts, video on demand) (I)
1.6.6 Discuss the impact of e-commerce on local and state economies (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 1.7: Analyze the role of creativity and innovation in e-commerce

Competency Builders:

1.7.1 Demonstrate brainstorming techniques (I)
1.7.2 Identify blocks to creativity (e.g., negativity, habit) (I)
1.7.3 Explain the impact of thinking styles on creativity (I)
1.7.4 Explain how creative problem solving can enhance your e-commerce business
1.7.5 Describe the impact of attitude on creativity
1.7.6 Analyze the impact of new paradigm thinking

BIL: Essential

EDU:	12	AD
	I	P

Competency 1.8: Analyze the impact of wireless communication on the delivery of e-commerce

Competency Builders:

1.8.1 Analyze the advantages and disadvantages of wireless e-commerce (I)
1.8.2 Define basic wireless e-commerce terminology (i.e., broadband, bundling, cell splitting, channel, cloning, public and private cryptosystem, ESN, frequency, GPS, MIN, etc.) (I)
1.8.3 Describe the different types of wireless devices (I)
1.8.4 Describe the security concerns associated with wireless e-commerce (I)
1.8.5 Demonstrate how to securely transmit a secret key over a radio interface
1.8.6 Explain how to avoid 'memory effect'
1.8.7 Describe the health concerns associated with the use of wireless phones

Unit 2: Marketing and Business Basics

BIL: Essential

EDU:	12	AD
	P	R

Competency 2.1: Characterize the nature of business

Competency Builders:

2.1.1 Identify types of business organizations and functions (e.g., outsourcing, partnerships, alliances)
2.1.2 Identify components of a business plan
2.1.3 Identify business reporting and information flow
2.1.4 Identify the ways in which organizational functions are interdependent
2.1.5 Identify types of communication channels (e.g., formal, informal)
2.1.6 Determine how business activities interface with data management functions
2.1.7 Define stakeholder relationships (e.g., customers, employees, shareholders, and suppliers)
2.1.8 Define the role of strategic planning in business
2.1.9 Identify generally accepted business ethics
2.1.10 Differentiate between ethics and legality
2.1.11 Explain the importance of business partnerships and relationships

BIL: Essential

EDU:	12	AD
	P	R

Competency 2.2: Explain the role of marketing

Competency Builders:

2.2.1 Define *marketing*
2.2.2 Define common marketing terminology
2.2.3 Explain the differences between products and services
2.2.4 Explain the values that marketing adds to a product or service
2.2.5 Explain the marketing concept
2.2.6 Identify primary functions of marketing
2.2.7 Explain the concept of market and market identification
2.2.8 Describe the evolution of marketing philosophies
2.2.9 Review criticisms of marketing philosophies

2.2.10 Explain the importance of marketing in a global economy
2.2.11 Define *mass customization*
2.2.12 Explain the relationship between ethics in marketing and the company culture
2.2.13 Explain the principles of direct marketing

BIL: Essential

EDU:	12	AD
	P	R

Competency 2.3: Evaluate marketing mix components

Competency Builders:
2.3.1 Define *marketing mix*
2.3.2 Evaluate the importance of product/service decisions in the marketing mix
2.3.3 Evaluate the importance of distribution and supply chain management
2.3.4 Evaluate the importance of promotion
2.3.5 Evaluate the importance of pricing

Unit 3: Economic Concepts and International Business

BIL: Essential

EDU:	12	AD
	P	R

Competency 3.1: Interpret economic concepts

Competency Builders:

3.1.1 Explain how supply, demand, and price are related
3.1.2 Explain the concept of private enterprise and business ownership
3.1.3 Explain the relationship among risk, competition, and profit
3.1.4 Identify the characteristics of a free enterprise system
3.1.5 Compare/contrast various forms of competition (e.g., pure, monopoly, oligopoly)
3.1.6 Describe the cyclical nature of the economy (e.g., unemployment, recession, inflation, depression, recovery)
3.1.7 Identify the effects of public and private economic activity on the business sector
3.1.8 Describe the relationship between business and government
3.1.9 Interpret productivity measures
3.1.10 Describe the impact of global economic changes on the U.S. economy
3.1.11 Discuss the impact of economic change on marketing mix strategies
3.1.12 Explain the impact of global competition
3.1.13 Describe the impact of technology on our economic system

BIL: Essential

EDU:	12	AD
	P	R

Competency 3.2: Describe economic indicators and trends

Competency Builders:

3.2.1 Define *gross national product* and *gross domestic product*
3.2.2 Describe the impact of the national debt
3.2.3 Describe the impact of interest rates
3.2.4 Define the impact of government spending
3.2.5 Describe the impact of business cycles
3.2.6 Describe the impact of inflation, growth, recession, and unemployment
3.2.7 Describe the impact of the consumer price index

BIL: Essential

EDU:	12	AD
	I	P

Competency 3.3: Explain international trade

Competency Builders:

3.3.1 Describe the nature and importance of international trade (I)
3.3.2 Describe the growth of international trade (I)
3.3.3 Explain the impact of the Internet on international trade (I)
3.3.4 Describe legal issues related to international e-commerce (I)
3.3.5 Explain balance of trade concepts (I)
3.3.6 Describe the implications of trade barriers on international e-commerce (I)
3.3.7 Describe the effect of currency exchange rates on international trade (I)
3.3.8 Describe the impact of a nation's government policies on international trade (I)
3.3.9 Describe the impact of a nation's political situation on international trade (I)
3.3.10 Describe geographical factors that affect international trade (I)
3.3.11 Explain the impact of a nation's economic condition on international trade (I)
3.3.12 Identify processes for assessing a nation as a potential trading location (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 3.4: Describe the impact of the cultural environment on business

Competency Builders:

3.4.1 Demonstrate knowledge of how culture influences business operations (I)
3.4.2 Identify social and cultural issues that affect the conduct of business (I)
3.4.3 Describe business practices in different cultures (I)
3.4.4 Describe the steps used to receive business visitors in different countries (I)
3.4.5 Describe the negotiation tactics and decision-making processes used in various cultures (I)
3.4.6 Describe types of business relationships maintained in various cultures (I)
3.4.7 Compare/contrast business entertainment practices in various parts of the world (I)

3.4.8 Identify cultural attitudes and practices in the U.S. that could inhibit successful business operations in another country (I)

3.4.9 Describe modifications to American business practices required for success in the global marketplace (I)

BIL: Recommended

EDU:	12	AD
		I

Competency 3.5: Develop communication skills for an international audience

Competency Builders:

3.5.1 Identify the customs of the recipient that impact communication

3.5.2 Find answers to questions related to international communications using available human, print, and electronic sources

3.5.3 Prepare documents in correct style for international communications

3.5.4 Use appropriate message and delivery in oral communications

BIL: Essential

EDU:	12	AD
	I	P

Competency 3.6: Evaluate the impact of global access on e-commerce

Competency Builders:

3.6.1 Explain why the Internet encourages globalization of business (I)

3.6.2 Evaluate the impact of multiple time zones on e-commerce (I)

3.6.3 Evaluate the impact of multiple languages on e-commerce (I)

3.6.4 Evaluate the impact of multiple currencies on e-commerce (I)

3.6.5 Convert currency (I)

3.6.6 Evaluate the impact of social and cultural issues on e-commerce (I)

Unit 4: Information Technology Basics

BIL: Essential

EDU:	12	AD
	P	R

Competency 4.1: Describe the impact of information technology on society

Competency Builders:

4.1.1 Describe how technology (e.g., PCs, larger computer systems, infrastructure) impacts people and organizations

4.1.2 Describe the impact of computers on career pathways in business/industry (e.g., how computers have eliminated and created jobs)

4.1.3 Identify security risks and associated safeguards

4.1.4 Describe the impact of computers on access to information and information exchange worldwide

4.1.5 Identify issues and trends affecting computers and information privacy

4.1.6 Describe ethical issues that have surfaced in the information age

4.1.7 Identify the importance of business continuity

4.1.8 Explain the history of information technology

BIL: Essential

EDU:	12	AD
	P	R

Competency 4.2: Identify the hardware components associated with information systems

Competency Builders:

4.2.1 Identify the elements of the information processing cycle (i.e., input, process, output, and storage)

4.2.2 Identify major hardware components and their functions (e.g., telecommunications and reference materials)

4.2.3 Identify types of computer storage devices

4.2.4 Identify types of processing (e.g., batch, interactive, event-driven, object-oriented)

4.2.5 Identify major operating system fundamentals and components and reference material

BIL: Essential

EDU:	12	AD
	P	R

Competency 4.3: Describe the classes of software associated with information systems

Competency Builders:

4.3.1 Identify the key functions of systems software

4.3.2 Explain widely used software applications (e.g., browsers, word processing, database management, spreadsheet development, CRM applications, web content development)

4.3.3 Identify new and emerging classes of software

4.3.4 Identify software used in e-commerce

Unit 5: Computer Applications

BIL: Essential

EDU:	12	AD
	P	R

Competency 5.1: Create documents using word processing software

Competency Builders:

5.1.1 Demonstrate keyboarding skills
5.1.2 Retrieve existing documents
5.1.3 Modify documents (e.g., letters, memos, reports) using existing forms and templates
5.1.4 Safeguard documents using name and save functions
5.1.5 Format text using basic formatting functions (e.g., page setup, tabs, bullets, page numbers, font enhancements, cut and paste)
5.1.6 Check documents using print preview functions
5.1.7 Locate/replace text using search and replace functions
5.1.8 Create new word processing forms, style sheets, and templates
5.1.9 Employ word processing utility tools (e.g., spell checker, grammar checker, thesaurus)
5.1.10 Create tables using table functions (e.g., setup, formatting, editing)
5.1.11 Create columns using column functions (e.g., setup, formatting, editing)
5.1.12 Create outlines
5.1.13 Create footnotes and endnotes
5.1.14 Create macros
5.1.15 Run macros
5.1.16 Assemble documents using merge functions (e.g., merge address files with letters and envelopes)
5.1.17 Format text using advanced formatting features (e.g., headers/footers/ dropped caps, indexing)
5.1.18 Print materials using print functions (e.g., number of copies, duplexing or one-sided, selected pages or whole document)
5.1.19 Verify accuracy of output
5.1.20 Edit documents
5.1.21 Access needed information using word processing help screens

BIL: Essential

EDU:	12	AD
	P	R

Competency 5.2: Create and modify a database

Competency Builders:

5.2.1	Design a simple database
5.2.2	Create a database table
5.2.3	Edit the design of a database table
5.2.4	Edit the content of a database table (i.e., add, delete, and modify records)
5.2.5	Search a table to locate records
5.2.6	Sort data in a single field
5.2.7	Create/modify a form
5.2.8	Perform single- and multiple-table queries (i.e., create, run, save)
5.2.9	Create calculated fields
5.2.10	Generate customized reports for database files
5.2.11	Process data using database functions (e.g., structure, format, attributes)
5.2.12	Locate and replace data using search and replace functions
5.2.13	Print forms, reports, and results of queries
5.2.14	Verify accuracy of output
5.2.15	Sort data using multiple-field sorts
5.2.16	Add/remove filters
5.2.17	Create multiple criteria expressions
5.2.18	Create adjoined files
5.2.19	Index files
5.2.20	Create subforms
5.2.21	Group data in reports
5.2.22	Create graphs
5.2.23	Alter the appearance of a form (i.e., add objects or properties)
5.2.24	Identify the relationship between database components
5.2.25	Design a database to address a business problem
5.2.26	Evaluate database design and functionality

BIL: Essential

EDU:	12	AD
	P	R

Competency 5.3: Create spreadsheets

Competency Builders:

5.3.1 Design a spreadsheet
5.3.2 Retrieve existing spreadsheets
5.3.3 Check spreadsheets using print preview functions
5.3.4 Format spreadsheets using formatting functions (e.g., page setup)
5.3.5 Perform calculations using simple and advanced formulas
5.3.6 Edit spreadsheets
5.3.7 Create charts and graphs from spreadsheets
5.3.8 Group worksheets
5.3.9 Delete within spreadsheets
5.3.10 Move/copy within spreadsheets
5.3.11 Input/process data using spreadsheet functions
5.3.12 Improve spreadsheet display using enhancement features
5.3.13 Protect data using spreadsheet protection features
5.3.14 Record macros
5.3.15 Run macros
5.3.16 Troubleshoot spreadsheet problems
5.3.17 Resolve function errors as needed
5.3.18 Create spreadsheet solutions to business problems
5.3.19 Make "*what if*—" business decisions using spreadsheets as a tool
5.3.20 Save spreadsheets
5.3.21 Access needed information using online help features
5.3.22 Print spreadsheets

BIL: Essential

EDU:	12	AD
	P	R

Competency 5.4: Perform basic desktop publishing functions

Competency Builders:

5.4.1 Format desktop publishing files
5.4.2 Enter information directly into document

5.4.3 Place preformatted text into document
5.4.4 Place graphics in document
5.4.5 Employ draw boxes
5.4.6 Create graphics files using clip art
5.4.7 Import scanned files
5.4.8 Enhance publications using different fonts, styles, attributes, justification, etc.
5.4.9 Enhance publications using paint/draw functions
5.4.10 Create two-sided documents
5.4.11 Perform editing functions
5.4.12 Set up master pages
5.4.13 Output desktop publishing files

BIL: Essential

EDU:	12	AD
	I	P

Competency 5.5: Create basic presentations using presentation graphics software

Competency Builders:

5.5.1 Edit presentations (I)
5.5.2 Copy from one presentation to another (I)
5.5.3 Print slide, presentation, outline, and notes (I)
5.5.4 Insert clip art in a slide (I)
5.5.5 Create word art objects (I)
5.5.6 Insert word art objects (I)
5.5.7 Create/modify a graph on a slide (I)
5.5.8 Add a template to a presentation (I)
5.5.9 Remove a template from a presentation (I)
5.5.10 Create graphics documents using drawing and painting software programs
5.5.11 Add transitions to slide shows (I)
5.5.12 Run manual and automatic slide shows (I)
5.5.13 Save slide show presentations (I)
5.5.14 Incorporate use of hardware devices in developing presentations (e.g., scanners, digital cameras, etc.)

BIL: Essential

EDU:	12	AD
	I	P

Competency 5.6: Integrate software computer applications

Competency Builders:

5.6.1 Select productivity tool
5.6.2 Select *source* application and *destination* application (I)
5.6.3 Move and copy information between integrated applications (I)
5.6.4 Link objects between applications (I)
5.6.5 Embed information in applications
5.6.6 Analyze problem to determine software solution
5.6.7 Analyze problem by selecting appropriate software

Unit 6: Internet

BIL: Essential

EDU:	12	AD
	P	R

Competency 6.1: Explain Internet basics

Competency Builders:

6.1.1 Identify the key characteristics of the Internet
6.1.2 Describe the ownership/administration of the Internet (e.g., Internet Architecture Board, Internet Network Information Center)
6.1.3 Explain the relationship between the Internet and the World Wide Web
6.1.4 Identify current issues related to the Internet
6.1.5 Identify services and tools offered on the Internet (e.g., file transfer protocol, newslists, e-mail)
6.1.6 Identify accepted Internet etiquette (i.e., netiquette)
6.1.7 Identify current uses and applications of the Internet
6.1.8 Identify demographics of Internet users
6.1.9 Explain Internet Service Provider (ISP), Application Service Provider (ASP), and Enterprise Service Provider (ESP)
6.1.10 Explain File Transfer Protocol (FTP)
6.1.11 Explain the Transmission Control Protocol/Internet Protocol (TCP/IP) suite
6.1.12 Explain HyperText Transfer Protocol (HTTP)
6.1.13 Explain the Domain Name Server (DNS)
6.1.14 Describe Internet security issues
6.1.15 Identify the differences between USENET and e-mail

BIL: Essential

EDU:	12	AD
	P	R

Competency 6.2: Access the Internet

Competency Builders:

6.2.1 Connect to the Internet
6.2.2 Test Internet connection
6.2.3 Identify the components of Internet software
6.2.4 Install Internet software

6.2.5 Explore browser features
6.2.6 Download free software upgrades and shareware from the Internet
6.2.7 Unpack files using compression software
6.2.8 Apply virus protection techniques
6.2.9 Explain security issues involved in accessing the Internet

BIL: Essential

EDU:	12	AD
	P	R

Competency 6.3: Use electronic mail

Competency Builders:
6.3.1 Explain the basic purposes of e-mail systems
6.3.2 Describe basic e-mail features and options
6.3.3 Explain security issues and guidelines for legal usage of e-mail
6.3.4 Describe contamination protection strategies for e-mail
6.3.5 Identify available e-mail systems and the characteristics/features of each
6.3.6 Access e-mail system using login and password functions
6.3.7 Access e-mail messages received
6.3.8 Access e-mail attachments
6.3.9 Explain e-mail etiquette
6.3.10 Create e-mail messages in accordance with established business standards (e.g., grammar, word usage, spelling, sentence structure, clarity, e-mail etiquette)
6.3.11 Send e-mail messages
6.3.12 Assign priority levels to messages
6.3.13 Create distribution lists
6.3.14 Employ e-mail options such as "reply requested" and "out-of-office reply"
6.3.15 Reply to e-mail messages
6.3.16 Forward e-mail messages
6.3.17 Attach documents to messages
6.3.18 Create folders for organizing messages and documents
6.3.19 Save e-mail messages/attachments
6.3.20 Delete e-mail messages
6.3.21 Print e-mail messages/attachments
6.3.22 Access needed information using e-mail help facilities and tools

BIL: Essential

EDU:	12	AD
	P	R

Competency 6.4: Utilize Internet services

Competency Builders:

6.4.1 Access business and technical information using the Internet
6.4.2 Identify the specific strengths, weaknesses, and special features of available search engines and portals
6.4.3 Select search engine(s) to use
6.4.4 Select appropriate search procedures and approaches
6.4.5 Locate information using search engine(s) and Boolean logic
6.4.6 Navigate web sites using software functions (e.g., Forward, Back, Go To, Bookmarks)
6.4.7 Evaluate Internet resources (e.g., accuracy of information)
6.4.8 Access library catalogs on the Internet
6.4.9 Access commercial, government, and education resources
6.4.10 Bookmark web addresses (URLs)
6.4.11 Download files from FTP archives
6.4.12 Subscribe to mailing lists
6.4.13 Participate in newsgroups
6.4.14 Access Internet Relay Chat service (IRC)
6.4.15 Retrieve online tools
6.4.16 Download/convert Internet programming files
6.4.17 Install/configure web browser
6.4.18 Explore the multimedia capabilities of the World Wide Web
6.4.19 Explore collaboration tools
6.4.20 Participate in online audio and video conferencing
6.4.21 Archive files
6.4.22 Compile a collection of business sites (e.g., finance and investment)
6.4.23 Explain the on-line purchase process

Unit 7: Programming

BIL: Recommended

EDU:	12	AD
	I	P

Competency 7.1: Explain common programming language concepts and vocabulary

Competency Builders:

7.1.1 Explain the concept of physical representation of digitized information (e.g., data, text, image, voice) (I)

7.1.2 Explain the hardware-software connection (I)

7.1.3 Explain the concepts of data and procedural representation (I)

7.1.4 Explain the function and operation of compilers and interpreters (I)

7.1.5 Explain the basics of structured, object-oriented, and event-driven programming (I)

7.1.6 Describe how a programming language can support multitasking and exception-handling (I)

7.1.7 Describe current key programming languages and the environment they are used in (e.g., C, C^{++}, Visual Basic, Java, RPG, Assembler, HTML, XML) (I)

7.1.8 Explain the difference between dynamic and static web programming (I)

7.1.9 Explain language specific programming techniques in an object-oriented and mark-up language (I)

BIL: Recommended

EDU:	12	AD
		I

Competency 7.2: Describe documentation associated with software development

Competency Builders:

7.2.1 Secure needed information using appropriate reference materials

7.2.2 Describe specifications

7.2.3 Identify constraints

7.2.4 Identify input and output (I/O) requirements

Unit 8: Networking

BIL: Recommended

EDU:	12	AD
	I	R

Competency 8.1: Describe general characteristics of network operating systems

Competency Builders:

8.1.1 Identify the four components of a network operating system (i.e., server platform, network services software, network redirection software, communications software)

8.1.2 Define *fat client*

8.1.3 Define *thin client*

8.1.4 Interpret basic networking terminology

BIL: Recommended

EDU:	12	AD
	I	R

Competency 8.2: Explain basic telecommunications and the interconnection of networks

Competency Builders:

8.2.1 Identify the different types of Wide-Area Network (WAN) connections

8.2.2 Describe point-to-point (PPP) interconnection

8.2.3 Identify basic telecommunications services (e.g., satellite, circuit switching, packet switching, wireless)

8.2.4 Differentiate between local exchange carriers (LECs) and interexchange carriers (IXCs or IECs)

8.2.5 Define local access and transport areas (LATAs)

8.2.6 Identify long-distance carriers and their services

8.2.7 Identify packet carriers and their services

8.2.8 Identify the role of telecommunications tariffs

8.2.9 Explain the role of the router in connecting to the Internet

8.2.10 Explain the role of a Channel Service Unit/Data Service Unit (CSU/DSU)

8.2.11 Identify basic telecommunication bandwidths

8.2.12 Describe the basics of ISDN, X.400 and xDSL technologies

Unit 9: Information Security

BIL: Essential

EDU:	12	AD
	P	R

Competency 9.1: Explain basic information security

Competency Builders:

9.1.1 Explain the difference between security and privacy
9.1.2 Explain how Internet and Intranet sites become vulnerable to attack
9.1.3 Explain the most common security problems for web sites
9.1.4 Define *firewall*
9.1.5 Explain Intrusion Detection System
9.1.6 Explain misuse intrusion
9.1.7 Explain anomaly intrusion
9.1.8 Explain transaction security
9.1.9 Explain security-related agencies and software

BIL: Essential

EDU:	12	AD
	P	R

Competency 9.2: Define the building blocks of a secure system

Competency Builders:

9.2.1 Define *user authentication*
9.2.2 Define *data origin authentication*
9.2.3 Define *confidentiality*
9.2.4 Define *data integrity*
9.2.5 Define *non-repudiation*
9.2.6 Define *peer authentication*
9.2.7 Define *message digests*

Unit 10: Graphic Design Basics

BIL: Recommended

EDU:	12	AD
	I	R

Competency 10.1: Demonstrate basic technical art skills (traditional and electronic)

Competency Builders:

10.1.1 Make computations for centering, spacing, and scaling drawings
10.1.2 Employ various types of drawing media and a variety of surfaces
10.1.3 Interpret information from drawings, prints, and sketches
10.1.4 Draw freehand sketches
10.1.5 Draw auxiliary views
10.1.6 Draw one- and two-point perspectives
10.1.7 Alter drawings
10.1.8 Create charts, graphs, and diagrams
10.1.9 Evaluate drawings
10.1.10 Make collages

BIL: Essential

EDU:	12	AD
	P	R

Competency 10.2: Explain design principles

Competency Builders:

10.2.1 Explain the two-dimensional picture plan
10.2.2 Identify the principles and elements of design and their relationship to each other (e.g., proportion, balance, harmony, rhythm, unity)
10.2.3 Describe the nature of color and color harmonies
10.2.4 Describe the impact of various color harmonies on a two-dimensional picture plan
10.2.5 Describe how color affects the principles of line, value, shape and form

BIL: Essential

EDU:	12	AD
	I	P

Competency 10.3: Demonstrate design skills

Competency Builders:

10.3.1 Apply elements of design (e.g., line, shape, color) (I)
10.3.2 Apply principles of design (e.g., proportion, balance, harmony, rhythm, unity) (I)
10.3.3 Apply color theory (I)
10.3.4 Compare tones, hues, and values (I)
10.3.5 Develop thumbnail concepts (I)
10.3.6 Develop rough and comprehensive layouts (I)
10.3.7 Paint freehand or within sketched designs
10.3.8 Determine method of applying color for impact (I)
10.3.9 Determine appropriate uses of halftone, duotone, and multi-color processes (I)
10.3.10 Create symmetric and asymmetric designs
10.3.11 Create various mock-ups and dummies
10.3.12 Select appropriate style for desired impact

BIL: Essential

EDU:	12	AD
	I	P

Competency 10.4: Use available graphics software programs

Competency Builders:

10.4.1 Compare different types of graphics software (I)
10.4.2 Explain grouping, transformations, and bleeding (I)
10.4.3 Identify development tools, styles, templates, and wizards (I)
10.4.4 Manipulate object attributes and types (I)
10.4.5 Identify appropriate software based on intended use (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 10.5: Create computer graphics

Competency Builders:

10.5.1 Identify types of graphics (I)
10.5.2 Define audience and purpose of graphics (I)
10.5.3 Select the appropriate style of graphics based on the intended purpose (I)
10.5.4 Select graphics software (I)
10.5.5 Identify image file formats (I)
10.5.6 Create graphics that integrate principles of communication and elements of visual design (I)
10.5.7 Manipulate color, shape, size, and textures of graphics (I)
10.5.8 Import objects from other applications (I)
10.5.9 Export objects to other applications (I)
10.5.10 Rotate graphics (I)
10.5.11 Rotate text (I)
10.5.12 Paint/touch up images (I)
10.5.13 Add/subtract image parts (I)
10.5.14 Apply 2-D and 3-D graphics principles (I)
10.5.15 Manipulate multiple image layers (I)
10.5.16 Employ masking techniques (I)
10.5.17 Crop images (I)
10.5.18 Scale images (I)
10.5.19 Employ various filtration methods (I)
10.5.20 Convert raster to vector images (I)
10.5.21 Store images in appropriate formats and resolutions for specific applications (I)
10.5.22 Save/retrieve graphics (I)
10.5.23 Print graphics to various output devices (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 10.6: Apply knowledge of typography

Competency Builders:

10.6.1 Identify typography materials (I)
10.6.2 Interpret typographic terms (I)
10.6.3 Describe typographic methods (I)
10.6.4 Identify proofreaders' marks (I)
10.6.5 Explain picas, points, and their conversion to inches (I)
10.6.6 Explain specification of type and copy fitting (I)
10.6.7 Identify typographic styles (I)
10.6.8 Define basic letter structures (I)
10.6.9 Mix families of type within a project (I)
10.6.10 Interpret typographical specifications (I)
10.6.11 Select proper letter and line spacing (I)
10.6.12 Select appropriate typefaces (I)
10.6.13 Prepare type formats (e.g., style sheets) (I)
10.6.14 Create templates (I)

Unit 11: Digital Media Design

BIL: Essential

EDU:	12	AD
	I	P

Competency 11.1: Demonstrate visual design principles

Competency Builders:

11.1.1 Explain the visual characteristics of various mediums (I)
11.1.2 Describe how the technical limitations of the medium affect content and style (I)
11.1.3 Differentiate between form and content
11.1.4 Plan a visual design in which form follows function
11.1.5 Select appropriate colors (I)
11.1.6 Describe basic design (I)
11.1.7 Consider human factors and user interface in visual design
11.1.8 Evaluate visual appeal of design

BIL: Essential

EDU:	12	AD
	I	P

Competency 11.2: Demonstrate functional design using digital media

Competency Builders:

11.2.1 Select appropriate digital product for design (I)
11.2.2 Explain functional requirements/specifications (I)
11.2.3 Select appropriate media types (I)
11.2.4 Explain necessary system architecture
11.2.5 Explain user interface
11.2.6 Explain navigation schema
11.2.7 Create storyboard (I)
11.2.8 Participate in iterative development with clients and development team members
11.2.9 Explain site architecture
11.2.10 Capture images with digital camera (I)
11.2.11 Archive images
11.2.12 Manage images

BIL: Essential

EDU:	12	AD
	I	P

Competency 11.3: Use digital imaging techniques and equipment

Competency Builders:

11.3.1 Identify standard hardware platform components and configurations (e.g., UNIX, IBM, Macintosh) (I)
11.3.2 Identify memory and storage requirements (I)
11.3.3 Identify computer architecture requirements for digital imaging (I)
11.3.4 Explain parallel/serial transmission
11.3.5 Identify types of digital imaging software (I)
11.3.6 Describe characteristics and operation of digital imaging equipment (e.g., scanner, digital camera, video input devices, graphics tablet, graphics expansion board, printer, film recorder, and output devices) (I)
11.3.7 Compare performance of different types of image acquisition hardware
11.3.8 Compare/contrast area and linear arrays
11.3.9 Compare/contrast exposure and multiexposure systems
11.3.10 Identify resolution issues (I)
11.3.11 Perform resolution calculations (e.g., number of pixels, number of colors)
11.3.12 Compare/contrast addressable and displayable resolution
11.3.13 Access information needed to operate a given digital camera system using standard print and electronic help tools

BIL: Recommended

EDU:	12	AD
	I	R

Competency 11.4: Explain the basic principles of 3-D modeling

Competency Builders:

11.4.1 Explain how to convert objects from two-dimensional to three-dimensional
11.4.2 Explain how a computer deals with geometry
11.4.3 Identify the software available for 3-D modeling
11.4.4 Describe the steps for building a 3-D model
11.4.5 Identify the components of a wireframe model

BIL: Recommended

EDU:	12	AD
	I	R

Competency 11.5: Explain the basic principles of animation

Competency Builders:

11.5.1 Explain the principles of continuity, key frames, motion paths, and motion
11.5.2 Describe the uses of special effects and virtual navigation
11.5.3 Identify available animation software programs/tools

Unit 12: Web Page Design

BIL: Essential

EDU:	12	AD
	P	R

Competency 12.1: Explain web page basics

Competency Builders:

12.1.1 Explain the role of browsers in reading files on the World Wide Web (e.g., text-only, hypertext)

12.1.2 Identify how different browsers affect the look of a web page

12.1.3 Compare/contrast the features and functions of software editors available for designing web pages

12.1.4 Explain how bandwidths affect data transmission and on-screen image

12.1.5 Describe the characteristics and uses of emerging technology add-ons

12.1.6 Explain how audio and video are used on web page (e.g., real time, on-demand platform costs)

BIL: Essential

EDU:	12	AD
	I	P

Competency 12.2: Explain basic Internet/web programming

Competency Builders:

12.2.1 Explain the purpose of web content delivery enablers (e.g., CGI, API, SSI) (I)

12.2.2 Explain how to interface client/server (I)

12.2.3 Describe client-side processing and its advantages/disadvantages (I)

12.2.4 Explain security issues related to client-side processing (I)

12.2.5 Explain various scripting languages (e.g., JavaScript, Visual Basic Script, ActiveX) and authoring programs (e.g., Adobe Page Mill, Front Page, Macromedia, Dream Weaver) (I)

12.2.6 Identify the uses and advantages/disadvantages of various scripting languages (I)

12.2.7 Identify new and emerging trends related to Internet programming (i.e., audio-video) (I)

12.2.8 Compare/contrast features, strengths, and weaknesses of different authoring programs

BIL: Recommended

EDU:	12	AD
	I	P

Competency 12.3: Apply knowledge of web hosting

Competency Builders:

12.3.1 Compare the advantages and disadvantages of running your own server vs. using a server provider
12.3.2 Identify server providers (e.g., uptime, technical support, connection time)
12.3.3 Plan how to establish a domain name
12.3.4 Upload files to the server
12.3.5 Collect/analyze usage statistics
12.3.6 Explain capacity of server to support site options and user traffic

BIL: Essential

EDU:	12	AD
	P	R

Competency 12.4: Create/maintain a basic web page

Competency Builders:

12.4.1 Open up a workspace to create a new Internet programming document
12.4.2 Create the basic Internet programming structure for a web page using a text editor
12.4.3 Explain the advantages of creating short multiple web pages rather than a single, long web page
12.4.4 Determine logical points to split information into multiple web pages
12.4.5 Create a template file using a text editor
12.4.6 Change a template file to create individual pages
12.4.7 Insert nondisplayed comments into Internet programming files
12.4.8 Display document within a web browser
12.4.9 Modify text using a text editor
12.4.10 Place different-level headings within document using appropriate Internet programming tags
12.4.11 Insert paragraph breaks into the text of document using appropriate Internet programming tag
12.4.12 Manipulate text cut and paste functions
12.4.13 Insert a stylized footer at the bottom of a page
12.4.14 Format text

12.4.15 Create lists
12.4.16 Add graphics/images
12.4.17 Add animation

BIL: Essential

EDU:	12	AD
	I	P

Competency 12.5: Format page layout

Competency Builders:
12.5.1 Identify Internet programming codes for formatting page layout (I)
12.5.2 Create a solid color background (I)
12.5.3 Change the color of text and hypertext link items (I)
12.5.4 Create a textured background using a graphic file (I)
12.5.5 Create various types of hard rule lines for page dividers (e.g., different thicknesses and widths, with and without 3-D shading) (I)
12.5.6 Create a table with rows and columns of text in a gridded display (I)
12.5.7 Create a layout scheme integrating text and pictures (I)
12.5.8 Create an invisible table with side-by-side columns
12.5.9 Create a table that has different colored cells
12.5.10 Explain interface design
12.5.11 Organize information using frames
12.5.12 Link documents

BIL: Essential

EDU:	12	AD
	I	P

Competency 12.6: Add audio and video to a web page

Competency Builders:
12.6.1 Explain how to deliver audio and video signals in real time (i.e., streaming) (I)
12.6.2 Describe audio sweetening techniques (I)
12.6.3 Describe audio and video compression techniques (I)
12.6.4 Add audio and video to a web page using Internet programming codes
12.6.5 Establish network administration procedures for audio and video

BIL: Essential

EDU:	12	AD
	I	P

Competency 12.7: Evaluate web statistical data

Competency Builders:

12.7.1 Evaluate sources of raw data for statistical web site analysis (e.g., HTTP server logs, web server hardware and operating system logs, network monitor logs, user registration databases, third-party web site analysis services) (I)

12.7.2 Explain the use of web statistics in performance and capacity planning (I)

12.7.3 Explain the use of web statistics in content management (I)

12.7.4 Explain the use of web statistics in site marketing and business management (I)

12.7.5 Explain the use of web statistics in developing/revising promotional strategy (I)

12.7.6 Evaluate factors that affect reliability of data

12.7.7 Evaluate web statistics analysis tools

12.7.8 Explain the use of web statistics to complete financial analysis

Unit 13: Personalization

BIL: Essential

EDU:	12	AD
	I	P

Competency 13.1: Analyze the impact of personalization

Competency Builders:

13.1.1 Analyze the concept of personalization in e-commerce
13.1.2 Analyze the customization component of personalization
13.1.3 Analyze the choice assistance component of personalization
13.1.4 Explain relationship marketing (I)
13.1.5 Explain the interrelationship of relationship marketing and personalization (I)
13.1.6 Explain the value of personalization in product differentiation (I)
13.1.7 Explain the value of personalization as a competitive advantage (I)
13.1.8 Explain the types of products and services best suited to personalization
13.1.9 Describe the types of personalization (I)
13.1.10 Analyze the trade-off between the costs and benefits of personalization
13.1.11 Explain the complexity of personalization decisions (I)
13.1.12 Identify when personalization is most cost effective
13.1.13 Explain the concept of marketing one-to-one (I)
13.1.14 Explain how privacy affects personalization (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 13.2: Identify the types of customization and personalization

Competency Builders:

13.2.1 Define *cookie* (I)
13.2.2 Explain adaptive customization (e.g., standard offerings with many settings, pop-up menus) (I)
13.2.3 Identify the advantages and disadvantages of adaptive customization (I)
13.2.4 Explain transparent customization (e.g., smart ads and smart offers, customizing without customer awareness) (I)
13.2.5 Identify the advantages and disadvantages of transparent customization (I)

13.2.6 Explain collaborative customization (e.g., consistent dialogue with customers to customize products) (I)
13.2.7 Identify the advantages and disadvantages of collaborative customization (I)
13.2.8 Explain cosmetic customization (e.g., treating a standard product slightly differently for an individual customer) (I)
13.2.9 Identify the advantages and disadvantages of cosmetic customization (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 13.3: Identify personalization systems

Competency Builders:
13.3.1 Explain rule-based systems (I)
13.3.2 Explain CASE (computer-assisted self-explication) systems (I)
13.3.3 Explain endorsement systems (I)
13.3.4 Explain collaborative filtering (I)

BIL: **RECOMMENDED**

EDU:	12	AD
		I

Competency 13.4: Develop a personalization system for an e-commerce site

Competency Builders:
13.4.1 Establish goals
13.4.2 Determine personalization strategies
13.4.3 Evaluate software if appropriate
13.4.4 Develop flow chart
13.4.5 Evaluate the results of a system

Unit 14: Electronic Payment Systems

BIL: Essential

EDU:	12	AD
	I	P

Competency 14.1: Describe electronic payment mechanisms

Competency Builders:

14.1.1 Describe electronic funds transfer at point of sale (EFT/POS) (I)
14.1.2 Describe direct data entry transmissions (I)
14.1.3 Describe financial electronic data interchanges (F-EDI) (I)
14.1.4 Describe stored-value cards (I)
14.1.5 Describe the features of electronic/digital cash (I)
14.1.6 Describe electronic wallets (I)
14.1.7 Describe the characteristics of successful payment systems (I)
14.1.8 Differentiate between the payment systems applicable for business-to-consumer, business-to-business, and consumer-to-consumer transactions (I)
14.1.9 Identify future trends in electronic payment systems (I)
14.1.10 Explain Internet Transaction Brokers (ITBs) (I)
14.1.11 Explain risks associated with electronic payments (I)
14.1.12 Identify the parties involved in an online purchase

BIL: Essential

EDU:	12	AD
	I	P

Competency 14.2: Identify costs involved with electronic payment systems

Competency Builders:

14.2.1 Identify costs for establishment of a merchant service and/or third-party verifier agreement (I)
14.2.2 Identify annual or monthly fees (I)
14.2.3 Identify merchant service and/or third-party verifier fees for each transaction (I)
14.2.4 Identify ISP costs for establishing site (I)
14.2.5 Identify ISP hosting fees (I)

Unit 15: Promotion

BIL: Essential

EDU:	12	AD
	P	R

Competency 15.1: Analyze promotion fundamentals

Competency Builders:

15.1.1 Analyze the communication process used in promotion (I)
15.1.2 Describe the benefits of using promotion (I)
15.1.3 Evaluate the costs associated with the use of promotion (I)
15.1.4 Describe types of promotional objectives (I)
15.1.5 Explain the types of promotion (I)
15.1.6 Identify the elements of the promotional mix (I)
15.1.7 Describe the importance of the promotional mix vs. single promotional element (I)
15.1.8 Analyze factors affecting the promotional mix (I)
15.1.9 Describe the use of business ethics in promotion (I)
15.1.10 Evaluate the importance of coordinating promotional mix elements (I)
15.1.11 Evaluate the return on investment of promotion (I)
15.1.12 Define return on investment (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.2: Analyze advertising fundamentals

Competency Builders:

15.2.1 Analyze the concept of advertising media (I)
15.2.2 Analyze the types, advantages and disadvantages of broadcast media (I)
15.2.3 Analyze the types, advantages and disadvantages print media (I)
15.2.4 Analyze the types, advantages and disadvantages of specialty advertising (I)
15.2.5 Analyze the types, advantages and disadvantages of Internet advertising (e.g., interacting personally and wireless network) (I)
15.2.6 Analyze the nature of direct advertising strategies (e.g., direct mail, e-mail, automated callers, faxes, catalogs) (I)
15.2.7 Analyze frequency marketing strategies

15.2.8 Examine the use of databases in advertising (I)
15.2.9 Identify sources and costs of databases (I)
15.2.10 Identify the difference between business-to-business and business-to-consumer advertising
15.2.11 Explain opt-in, opt-out, permission marketing as it relates to advertising
15.2.12 Identify niche advertising

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.3: Determine the cost of advertising media for e-commerce sites

Competency Builders:
15.3.1 Identify factors affecting the cost of newspaper ads (I)
15.3.2 Identify factors affecting the cost of magazine ads (I)
15.3.3 Identify factors affecting the cost of radio ads (I)
15.3.4 Identify factors affecting the cost of television ads (I)
15.3.5 Identify factors affecting the cost of direct mail advertising (I)
15.3.6 Identify factors affecting the cost of e-mail advertising (I)
15.3.7 Identify factors affecting the cost of banner ads (e.g., click-through pricing, bartering, Internet Advertising Bureau rate cards, audience demographics) (I)
15.3.8 Identify factors affecting the cost of outdoor ads (I)
15.3.9 Use rate cards (I)
15.3.10 Explain the use of discount strategies (I)
15.3.11 Examine negotiation strategies
15.3.12 Calculate media costs (I)
15.3.13 Compare media cost effectiveness in reaching target audience
15.3.14 Evaluate media selection (I)
15.3.15 Identify factors affecting the costs of affiliate advertising (I)
15.3.16 Identify factors affecting the costs of e-commerce advertising (I)
15.3.17 Explain benefits of alliances and partnerships

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.4: Design Internet advertising

Competency Builders:

15.4.1 Differentiate between Internet ads
15.4.2 Determine objective of placement (e.g., generate customer leads, create traffic)
15.4.3 Evaluate locations for ad placement (e.g., search engines, directories, specialty websites, sponsorship websites)
15.4.4 Develop an ad placement strategy
15.4.5 Define goal of Internet ads (e.g., banners, buttons) (I)
15.4.6 Identify standard sizes for Internet ads (I)
15.4.7 Identify file formats for graphic ads (I)
15.4.8 Use layers to create simple animation
15.4.9 Create a tagline (I)
15.4.10 Use design features to gain attention (I)
15.4.11 Create design that encourages order (I)
15.4.12 Evaluate software packages for Internet ads management

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.5: Manage Internet ads

Competency Builders:

15.5.1 Place Internet ads (I)
15.5.2 Evaluate results
15.5.3 Evaluate cost effectiveness
15.5.4 Compare potential effectiveness with other Internet strategies
15.5.5 Determine the types of tracking methods (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.6: Plan print advertising campaign

Competency Builders:

15.6.1 Compare the publishing lead time for newspaper display advertisements to that of magazine advertisements (I)

15.6.2 Determine the most suitable print media for an e-commerce product or service considering the target market characteristics of the media and message (I)

15.6.3 Determine ideal frequency and duration of print media advertisement campaign for an e-commerce product or service

15.6.4 Prepare a budget for print media advertising campaign for an e-commerce product or service

15.6.5 Describe procedures to place a display advertisement in a newspaper or magazine

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.7: Design print advertising

Competency Builders:

15.7.1 Define print advertisement basic terminology (e.g., headlines, body copy, tagline, subheads logo, column inch) (I)

15.7.2 Compare the strengths and weaknesses of newspaper advertising to magazine advertising (I)

15.7.3 Select the most appropriate appeal for a print display advertisement for an e-commerce product (e.g., informational, emotional, variety, price, humor, persuasive)

15.7.4 Explain the importance of advertisement location (e.g., column, section, page, location on page) (I)

15.7.5 Explain the Gutenberg Diagonal and its international implications (I)

15.7.6 Describe techniques to capture the attention of readers in print display advertisements (I)

15.7.7 Analyze the selling power of existing commercial print display advertisement

15.7.8 Layout a display advertisement for an e-commerce product or service

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.8: Plan television advertising campaign

Competency Builders:

15.8.1 Define *network* and *spot time* (I)

15.8.2 Compare the advantages and disadvantages of network, local, and cable advertising (I)

15.8.3 Describe the target market for specific commercial television programs (I)

15.8.4 Select the ideal placement of a television advertisement for an e-commerce product or service (e.g., network, local, cable, time of day, day of week, program)

15.8.5 Select the ideal frequency and duration for a television advertisement campaign for an e-commerce product or service

15.8.6 Prepare a budget for television advertising of an e-commerce product or service

15.8.7 Describe the procedures for placing network, local, and cable television advertisements

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.9: Design television advertising

Competency Builders:

15.9.1 Describe the convergence of Internet and television media (I)

15.9.2 Select the most appropriate appeal for a television advertisement for an e-commerce product or service (e.g., informational, emotional, variety, price, humor, persuasive)

15.9.3 Describe the advantages and disadvantages of 10-second, 30-second, and 60-second television spots, and infomercials (I)

15.9.4 Describe the techniques used in television advertisements to capture the attention of viewers (I)

15.9.5 Analyze the selling power of existing television commercials (I)

15.9.6 Develop a story board for a television advertisement for an e-commerce product or service

15.9.7 Videotape a 30-second television advertisement for an e-commerce product or service

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.10: Plan radio advertising campaign

Competency Builders:

15.10.1. Explain the difference between local and network radio programs (I)
15.10.2 Cite several network radio programs (I)
15.10.3 Compare the advantages and disadvantages of network vs. local radio advertising
15.10.4 Describe the target market for specific radio programs (I)
15.10.5 Select the ideal placement of a radio advertisement for an e-commerce product or service (e.g., time of day, day of week, program)
15.10.6 Prepare a budget for a radio advertising campaign for an e-commerce product or service
15.10.7 Describe the procedures for placing a network and local media advertisement

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.11: Design radio advertising

Competency Builders:

15.11.1 Select the most appropriate appeal for a radio advertisement for an e-commerce product or service (e.g., informational, emotional, variety, price, humor, persuasive)
15.11.2 Describe the advantages and disadvantages of 15-second, 30-second, and 60-second radio spots (I)
15.11.3 Describe the techniques used in radio advertisement to capture the attention of the listeners (I)
15.11.4 Analyze the selling power of existing radio advertisements (I)
15.11.5 Write a script for a 30-second radio advertisement
15.11.6 Tape record a 30-second radio advertisement

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.12: Plan publicity and public relations activities for an e-commerce site

Competency Builders:

15.12.1 Differentiate between publicity and public relations (I)
15.12.2 Describe the advantages and disadvantages of publicity and public relations (I)
15.12.3 Describe steps for obtaining publicity (I)
15.12.4 Identify ways to leverage negative publicity
15.12.5 Describe the impact of the Internet on publicity (I)
15.12.6 Explain the purposes of Internet publicity firms
15.12.7 Describe the advantages of participating in community activities
15.12.8 Discuss the role of online communities
15.12.9 Develop a publicity plan
15.12.10 Develop a public relations plan
15.12.11 Write a news release to promote an e-commerce business (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.13: Identify the advantages and disadvantages of sales promotion activities

Competency Builders:

15.13.1 Identify types of sales promotion (e.g., coupons, premiums, sweepstakes, etc.) (I)
15.13.2 Identify how sales promotion can be used in e-commerce (I)
15.13.3 Calculate the costs of sales promotion activities (I)
15.13.4 Determine when sales promotion activities are the best promotional tool (I)
15.13.5 Generate a sales promotion plan for an e-commerce site
15.13.6 Identify return on investment of sales promotion activities

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.14: Analyze affiliate marketing and co-branding strategies

Competency Builders:

15.14.1 Explain the advantages and disadvantages of promotional partnering (I)
15.14.2 Analyze goals for promotional partnering (I)
15.14.3 Analyze affiliate and co-branding opportunities (I)
15.14.4 Determine costs and benefits (I)
15.14.5 Evaluate potential partner businesses using developed selection criteria
15.14.6 Evaluate the effectiveness of affiliate marketing

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.15: Develop Internet links (link popularity)

Competency Builders:

15.15.1 Identify goals for Internet linkages (e.g., increased traffic, customer service, market niche development) (I)
15.15.2 Survey potential sites (I)
15.15.3 Select sites based upon developed criteria
15.15.4 Negotiate linking agreements
15.15.5 Evaluate link effectiveness in meeting goals
15.15.6 Survey shopping lots (I)
15.15.7 Identify legal aspects of linking

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.16: Manage registration, ranking, and positioning of an e-commerce site

Competency Builders:

15.16.1 Determine method to register with search engines, shopping bots, and directories (e.g., manual, secured service) (I)
15.16.2 Determine appropriate search engines, shopping bots, and directories (e.g., industry specific, news group related, general) (I)
15.16.3 Identify processes to improve visibility in search engines (e.g., metatags, titling, keyword repetition, content management, site design, and link popularity) (I)
15.16.4 Follow procedures for site registration (I)
15.16.5 Evaluate registration results
15.16.6 Monitor placement
15.16.7 Evaluate legal effect of registration (e.g., spamming, duplication)
15.16.8 Identify technology trends

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.17: Evaluate promotional sources of visits and sales

Competency Builders:

15.17.1 Explain click-through rates (I)
15.17.2 Use web log and commerce server data (i.e., common log and referrer log) (I)
15.17.3 Use traffic and commerce software
15.17.4 Calculate revenue per visits (I)
15.17.5 Calculate revenue per page viewed (I)

BIL: Essential

EDU:	12	AD
	P	R

Competency 15.18: Develop a basic promotional plan for an e-commerce site

Competency Builders:

15.18.1 Identify the target market
15.18.2 Develop objectives
15.18.3 Choose a theme
15.18.4 Develop promotional mix strategies
15.18.5 Develop timeline and action plan
15.18.6 Discuss budget constraints
15.18.7 Coordinate promotional activities
15.18.8 Develop evaluation process for the promotional plan

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.19: Develop a comprehensive promotional plan for an e-commerce site

Competency Builders:

15.19.1 Identify the target market (I)
15.19.2 Develop objectives (I)
15.19.3 Choose a theme (I)
15.19.4 Develop promotional mix strategies (I)
15.19.5 Develop a media plan (I)
15.19.6 Develop timeline and action plan (I)
15.19.7 Coordinate promotional activities (I)
15.19.8 Develop a budget
15.19.9 Evaluate the plan using milestones and benchmarks (I)

BIL: Essential

EDU:	12	AD
	P	R

Competency 15.20: Explain the selling function

Competency Builders:

15.20.1 Explain the purpose and importance of selling
15.20.2 Describe circumstances when personal selling is most important in the marketing mix
15.20.3 Explain company selling policies
15.20.4 Explain the role of customer service as a component of selling relationships
15.20.5 Identify key factors in building a clientele
15.20.6 Explain business ethics in selling
15.20.7 Describe the use of technology in the selling function
15.20.8 Describe the nature of selling regulations
15.20.9 Explain the follow-up function
15.20.10 Examine automated follow-up

BIL: Essential

EDU:	12	AD
	P	R

Competency 15.21: Sell products and services

Competency Builders:

15.21.1 Acquire product knowledge using online and traditional sources
15.21.2 Prepare for the sales presentation
15.21.3 Qualify customers
15.21.4 Complete customer/client research and profile
15.21.5 Establish relationship with client/customer
15.21.6 Address needs of individual personalities of clients/customers
15.21.7 Determine customer/client needs
15.21.8 Identify customer's buying motives
15.21.9 Use buying motives as basis of sales presentation
15.21.10 Facilitate customer buying decisions
15.21.11 Prescribe solution to customer needs
15.21.12 Demonstrate product
15.21.13 Illustrate service

15.21.14 Convert client/customer objections into selling points
15.21.15 Evaluate negotiation strategies for use in closing the sale
15.21.16 Close the sale
15.21.17 Sell related products/services
15.21.18 Process sales documents
15.21.19 Follow up the sale
15.21.20 Use on-line strategies for follow-up
15.21.21 Prepare sales reports
15.21.22 Evaluate sales reports
15.21.23 Maintain customer database
15.21.24 Plan strategies for meeting sales quotas

BIL: Essential

EDU:	12	AD
	I	P

Competency 15.22: Integrate e-commerce site into traditional sales and customer service process

Competency Builders:

15.22.1 Identify the benefits of site/online sales (I)
15.22.2 Create integrated sales presentation materials (I)
15.22.3 Create an electronic sales presentation with an integrated Internet link (I)
15.22.4 Identify incentives for sales staff
15.22.5 Evaluate effectiveness of integration
15.22.6 Provide customer training for use of on-line buying
15.22.7 Determine training needs for traditional sales staff for use on e-commerce site
15.22.8 Identify customer service issues
15.22.9 Evaluate cost of selling online vs. retail sales

Unit 16: Consumer Behavior

BIL: Essential

EDU:	12	AD
	I	P

Competency 16.1: Describe consumer behavior research concepts

Competency Builders:

16.1.1 Explain the concept of consumer behavior (I)
16.1.2 Describe the role of consumer behavior in strategic planning (I)
16.1.3 Describe the three basic categories of consumer consumption activities (i.e., impulse buying, habitual purchase behavior, consumption problem-solving) (I)
16.1.4 Identify the central variables that influence consumer behavior (I)
16.1.5 Explain the relationship between market segmentation and consumer research
16.1.6 Describe the relationship between consumer needs and motivation
16.1.7 Describe personality theories
16.1.8 Explain the use of personality characteristics to segment markets
16.1.9 Explain the relationship between consumer perception and marketing
16.1.10 Describe the relationship between product symbolism and consumer behavior
16.1.11 Describe the influence of perceived risk on purchase strategies
16.1.12 Describe ways to measure attitudes
16.1.13 Describe the nature of consumer attitude formation
16.1.14 Explain attitude-change strategies
16.1.15 Explain types of audiences (I)
16.1.16 Explain the credibility of sources of consumer communications (I)
16.1.17 Explain the nature of group dynamics
16.1.18 Describe the roles of the family in the decision-making process
16.1.19 Explain the concept of family life cycle (FLC) as a marketing tool (I)
16.1.20 Explain the relationship between social class and consumer behavior (I)
16.1.21 Describe the influence of culture on consumer behavior (I)
16.1.22 Explain subcultural aspects of consumer behavior (I)
16.1.23 Describe the concept of cross-cultural consumer behavior (I)
16.1.24 Describe the nature of consumer decision-making models (I)
16.1.25 Identify resources for obtaining consumer behavior information (I)
16.1.26 Explain buying trigger strategies

BIL: Essential

EDU:	12	AD
	I	P

Competency 16.2: Describe organizational buyer behavior

Competency Builders:

16.2.1 Explain the similarities and differences between organizational customers and individual consumers (I)

16.2.2 Describe the categorization of organizational buyers by their objectives as industrial buyers, resellers, and institutional buyers (I)

16.2.3 Describe the categorization of organizational buyers based on their economic output using the North American Industry Classification System or the Standard Industrial Classification system (I)

16.2.4 Describe the three types of buying situations of organizations (I)

16.2.5 Outline the organizational buying process

16.2.6 Identify the internal and external factors that affect organizational buying decisions

16.2.7 Identify the functional areas of an organization that influence buying decisions (I)

16.2.8 Identify the roles assumed by members of the decision unit

16.2.9 Describe organizational buyer profile

BIL: Essential

EDU:	12	AD
	I	P

Competency 16.3: Explain online consumer behavior principles

Competency Builders:

16.3.1 Identify how the web is similar to and different from traditional media environments (I)

16.3.2 Explain how clickstream data is obtained (I)

16.3.3 Explain how clickstream data is used to predict consumer behavior (I)

16.3.4 Explain factors that affect reliability of demographic and clickstream information

16.3.5 Explain the role of visit duration on click decision (I)

16.3.6 Explain why and how consumer decision-making is influenced differently online

16.3.7 Establish consumer profiles

Unit 17: Branding

BIL: Essential

EDU:	12	AD
	P	R

Competency 17.1: Evaluate branding concepts

Competency Builders:

17.1.1 Explain the concept of branding
17.1.2 Explain how the Internet affects branding
17.1.3 Explain the importance of branding in buyer decision-making
17.1.4 Define *trademark*, *brand name*, *brand mark*, *licensing*, and *brand equity*
17.1.5 Explain halo effect
17.1.6 Evaluate reasons why customers are brand loyal
17.1.7 Describe brand strategies (e.g., family brand, individual brand, multiple brand strategy) and the advantages and disadvantages of each
17.1.8 Describe trademarks and trademark limitations
17.1.9 Explain the differences between national brands, private brands, and generic brands and the advantages and disadvantages of each
17.1.10 Analyze the factors that influence the success of national vs. private, private vs. generic brands
17.1.11 Analyze the value of branding for businesses
17.1.12 Analyze the pros and cons of branding for consumers
17.1.13 Describe URL implications

BIL: Essential

EDU	12	AD
	I	P

Competency 17.2: Demonstrate the brand name development process

Competency Builders:

17.2.1 Identify the key components of a brand strategy
17.2.2 Determine brand strategy (I)
17.2.3 Determine brand name criteria (I)
17.2.4 Create a list of potential brand names (I)
17.2.5 Participate in the selection of the names most appropriate for further testing (I)
17.2.6 Obtain consumer reactions to selected brand names

17.2.7 Evaluate consumer reactions to selected brand names
17.2.8 Conduct basic trademark and patent copyright searches
17.2.9 Participate in final selection of brand name (I)
17.2.10 Identify resources to conduct trademark and patent copyright searches
17.2.11 Describe the complexities and legal issues of trademarks, and patents copyrights

BIL: Essential

EDU:	12	AD
	I	P

Competency 17.3: Build brand identity

Competency Builders:

17.3.1 Identify business components that influence buyer perception of a brand (e.g., advertising, product presentation, customer service, packaging, shipping, public relations) (I)
17.3.2 Identify e-commerce site components that influence branding (e.g., logo, graphic style, online customer service, product information, site navigation, customer service, testing, core values) (I)
17.3.3 Integrate logos, slogans, URL, etc. throughout offline and online publications and advertising (I)
17.3.4 Integrate components into a consistent brand identity process

Unit 18: Integrated Business Systems

BIL: Essential

EDU:	12	AD
	I	P

Competency 18.1: Explain concepts of electronic business systems

Competency Builders:

18.1.1 Explain the concepts of convergent e-business systems (I)
18.1.2 Explain the benefits of integrated e-business systems (I)
18.1.3 Identify the requirements for success in creating or converting to e-business systems
18.1.4 Identify the range of costs associated with developing e-business systems
18.1.5 Describe possible barriers to the implementation of e-business systems (I)
18.1.6 Describe benefits of implementing e-business systems (I)
18.1.7 Describe risks of implementing e-business systems (I)
18.1.8 Describe security and privacy issues in e-business systems (I)
18.1.9 Identify trends in e-business systems (I)
18.1.10 Describe Enterprise Resource Planning (ERP)
18.1.11 Explain the use of e-business systems to achieve the goals of ERP
18.1.12 Explain Database Management System (DBMS) basics
18.1.13 Identify trends in Internet communications standards

BIL: Essential

EDU:	12	AD
	I	P

Competency 18.2: Explain Electronic Data Interchange (EDI)

Competency Builders:

18.2.1 Define *Electronic Data Interchange* (EDI) (I)
18.2.2 Identify the benefits of EDI (I)
18.2.3 Explain how EDI works
18.2.4 Identify the essential elements of EDI (I)
18.2.5 Define EDI transaction sets and data elements
18.2.6 Describe the different standards governing EDI transactions
18.2.7 Describe how Value Added Networks (VANs) operate

Unit 19: Supply Chain Management

BIL: Essential

EDU:	12	AD
	I	P

Competency 19.1: Evaluate the concept of Supply Chain Management (SCM)

Competency Builders:

19.1.1 Define *Supply Chain Management* (I)
19.1.2 Identify the components of the supply chain (I)
19.1.3 Evaluate how supply chain management reduces order response times (I)
19.1.4 Evaluate how supply chain management reduces inventory requirements (I)
19.1.5 Evaluate how supply chain management reduces costs and increases revenues (I)
19.1.6 Evaluate how supply chain management reduces cumulative cycle time
19.1.7 Evaluate key success factors (I)
19.1.8 Evaluate the role of Electronic Data Interchange in supply chain management (I)
19.1.9 Evaluate the role of intranets and extranets in supply chain management (I)
19.1.10 Examine future trends in supply chain management (I)
19.1.11 Identify the components of supply chain management which can be processed electronically in an e-commerce environment

BIL: Essential

EDU:	12	AD
	P	R

Competency 19.2: Explain how e-commerce is changing traditional purchasing

Competency Builders:

19.2.1 Explain the nature and scope of purchasing
19.2.2 Explain the role of procurement in an integrated supply chain
19.2.3 Develop partnerships with vendors to procure goods through an integrated system
19.2.4 Explain company buying/purchasing policies
19.2.5 Identify contractual, ethical and legal issues of the purchasing function
19.2.6 Explain the buying process
19.2.7 Explain the nature of buyer reputation/vendor relationships
19.2.8 Explain how to select appropriate products/services
19.2.9 Explain the nature of buyer reputation/vendor relationships
19.2.10 Determine product/service specifications

19.2.11 Determine quantities of products/services to buy
19.2.12 Determine when to buy products/services
19.2.13 Explain vendor search
19.2.14 Obtain competing prices from vendors
19.2.15 Explain contracts
19.2.16 Identify final cost of product/service to business
19.2.17 Explain purchase order(s)
19.2.18 Explain regular product deliveries
19.2.19 Explain payments for products and services
19.2.20 Explain integrated electronic purchasing systems
19.2.21 Explain security issues in deeply integrated supplier relationships

BIL: Essential

EDU:	12	AD
	P	R

Competency 19.3: Explain physical distribution strategies for an e-commerce site

Competency Builders:

19.3.1 Explain the nature and scope of distribution
19.3.2 Explain the nature of channels of distribution
19.3.3 Explain the role of technology in distribution
19.3.4 Identify key factors in selecting a distribution system
19.3.5 Describe different types of distribution channels for consumer goods
19.3.6 Describe different types of distribution channels for industrial goods
19.3.7 Describe factors that influence channel length
19.3.8 Explain channel widths (i.e., intensive distribution, exclusive distribution, selective distribution)
19.3.9 Explain how channel functions influence channel choice
19.3.10 Explain how channel flows influence channel choice
19.3.11 Explain the nature of channel member relationships
19.3.12 Explain the transfer principle
19.3.13 Explain the concepts of vertical marketing systems (VMS/MMS)
19.3.14 Explain alternatives to VMSs/MMSs
19.3.15 Explain the relationship between customer service and distribution
19.3.16 Explain potential channel conflicts and possible solutions
19.3.17 Explain channels of distribution
19.3.18 Explain channel members
19.3.19 Explain distribution with other marketing activities
19.3.20 Explain the role of warehousing/stock handling in e-commerce

BIL: Essential

EDU:	12	AD
	P	R

Competency 19.4: Explain the shipping process in e-commerce

Competency Builders:

19.4.1 Explain the role of shipping in e-commerce
19.4.2 Describe ways to ship products
19.4.3 Define common shipping terms
19.4.4 Identify common shipping providers
19.4.5 Compare shipping rates
19.4.6 Compare shipping methods based on size of product(s)
19.4.7 Select best shipping methods
19.4.8 Identify types of packing materials
19.4.9 Identify packing material vendors
19.4.10 Compare costs of packing materials
19.4.11 Identify an electronic information system to track orders

BIL: Essential

EDU:	12	AD
	I	P

Competency 19.5: Manage e-commerce business inventory

Competency Builders:

19.5.1 Evaluate the role of inventory control in supply chain management (I)
19.5.2 Explain the concept of ABC analysis (I)
19.5.3 Explain cost considerations in inventory management (I)
19.5.4 Calculate economic order quantity (EOQ) (I)
19.5.5 Calculate reorder point (I)
19.5.6 Calculate average inventory (I)
19.5.7 Explain the concept of Just-In-Time (JIT) (I)
19.5.8 Use an online inventory control system to locate and determine the availability of goods within the business (I)
19.5.9 Organize inventory counts (I)
19.5.10 Apply a just-in-time inventory system (I)
19.5.11 Explain the nature of inventory control systems (I)
19.5.12 Explain unit inventory control systems (I)

19.5.13 Explain dollar inventory control systems (I)
19.5.14 Evaluate inventory (I)

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Unit 20: Pricing

BIL: Essential

EDU:	12	AD
	P	R

Competency 20.1: Evaluate pricing fundamentals

Competency Builders:

20.1.1 Explain the nature and scope of the pricing function
20.1.2 Evaluate the role of business ethics in pricing
20.1.3 Evaluate the use of technology in pricing
20.1.4 Identify the basic considerations consumers and businesses weigh in accepting a price
20.1.5 Describe the price-setting process
20.1.6 Explain pricing objectives
20.1.7 Explain price sensitivity
20.1.8 Explain price elasticity
20.1.9 Evaluate tax issues in online sales
20.1.10 Evaluate the relationship of shipping costs to prices in online sales
20.1.11 Explain the impact of pricing errors in e-commerce
20.1.12 Explain price testing
20.1.13 Research competitors prices
20.1.14 Explain real-time pricing in the online environment

BIL: Essential

EDU:	12	AD
	I	P

Competency 20.2: Evaluate pricing strategies for an e-commerce business

Competency Builders:

20.2.1 Evaluate features, purposes, advantages and disadvantages of cost-based pricing strategies (I)
20.2.2 Evaluate characteristics, goals, advantages and disadvantages of demand-based pricing strategies (I)
20.2.3 Evaluate characteristics, goals, advantages and disadvantages of competition-based pricing strategies (I)

20.2.4 Evaluate characteristics, goals, advantages and disadvantages of product mix pricing strategies (I)
20.2.5 Evaluate characteristics, goals, advantages and disadvantages of product change pricing strategies (I)
20.2.6 Evaluate characteristics, goals, advantages and disadvantages of segmented (e.g., customer segmented, location, time) pricing strategies (I)
20.2.7 Evaluate the impact of e-commerce on pricing strategies (I)

BIL: Essential

EDU:	12	AD
	P	R

Competency 20.3: Evaluate pricing techniques

Competency Builders:
20.3.1 Evaluate psychological pricing
20.3.2 Describe geographic pricing
20.3.3 Evaluate discount pricing techniques
20.3.4 Describe promotional pricing techniques

BIL: Essential

EDU:	12	AD
	I	P

Competency 20.4: Determine prices for e-commerce products/ services

Competency Builders:
20.4.1 Determine pricing objective (I)
20.4.2 Calculate cost of product (I)
20.4.3 Calculate break-even point (I)
20.4.4 Calculate elasticity of demand (I)
20.4.5 Analyze competitors' prices (I)
20.4.6 Select a pricing strategy (I)
20.4.7 Set prices (I)
20.4.8 Adjust prices to maximize profitability (I)
20.4.9 Evaluate difficulties in applying traditional pricing strategies to e-commerce (I)

Unit 21: Product Management

BIL: Essential

EDU:	12	AD
	P	R

Competency 21.1: Describe the factors involved in product/service operations

Competency Builders:

21.1.1 Identify organization objectives
21.1.2 Identify the stages of product/service development
21.1.3 Identify the elements of product positioning
21.1.4 Identify the stages in a product life cycle
21.1.5 Identify the importance of product grades and standards
21.1.6 Describe the importance of warranties and guaranties
21.1.7 Describe product liability issues

BIL: Essential

EDU:	12	AD
	I	P

Competency 21.2: Plan product/service management strategies for an e-commerce business

Competency Builders:

21.2.1 Describe the role of product/service management in business success (I)
21.2.2 Describe the components of product/service management (I)
21.2.3 Describe the product/service planning process (I)
21.2.4 Describe the characteristics of product/service bundling (I)
21.2.5 Explain the impact of business environment (e.g., online vs. "brick-and-mortar") on product selection (I)
21.2.6 Compare/contrast competition (e.g., their product/service mix, prices, sales, promotional techniques) (I)
21.2.7 Explain targeting strategy (I)
21.2.8 Plan product/service mix (I)
21.2.9 Solicit customer feedback (I)
21.2.10 Use customer feedback (I)
21.2.11 Participate in the evaluation of product/service management strategies
21.2.12 Participate in the evaluation of factors used in adjusting product/service mix

BIL: Essential

EDU:	12	AD
	I	P

Competency 21.3: Describe new product/service selection

Competency Builders:

21.3.1 Identify sources of ideas for new products/services (I)
21.3.2 Identify products which are most likely to succeed in an e-commerce venture (I)
21.3.3 Identify methods of screening ideas for new products/services (I)
21.3.4 Identify preliminary sales estimate (I)
21.3.5 Identify methods for evaluating a new product/service idea (I)
21.3.6 Explain the importance of pretesting a product/service prototype (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 21.4: Describe on-line product introduction strategies

Competency Builders:

21.4.1 Compare and contrast traditional product development with on-line product development (I)
21.4.2 Explain the need for differing development cycles for online products (I)
21.4.3 Explain the impact of modularity in design
21.4.4 Describe the rapid customer feedback system for product development (I)
21.4.5 Explain the testing process
21.4.6 Describe rapid release marketing introduction strategies

BIL: Essential

EDU:	12	AD
	P	R

Competency 21.5: Explain packaging principles

Competency Builders:

21.5.1 Describe the impact of packaging decisions on customer response and on marketing mix elements
21.5.2 Describe primary functions of packaging
21.5.3 Describe the elements of package design (e.g., color, style, copy, form)
21.5.4 Explain the necessity of packaging decision tradeoffs
21.5.5 Describe typical criticisms of packaging
21.5.6 Identify the main function of a label on a package
21.5.7 Describe the three basic kinds of labels
21.5.8 Explain how labeling decisions supplement packaging decisions
21.5.9 Explain packaging and labeling laws
21.5.10 Participate in packaging decisions
21.5.11 Explain costs associated with packaging
21.5.12 Explain how packaging impacts product shipment and returns

Unit 22: Customer Relationship Management

BIL: Essential

EDU:	12	AD
	P	R

Competency 22.1: Explain basic Customer Relationship Management (CRM) concepts

Competency Builder:

22.1.1 Explain the reasons and methods to determine what customers want
22.1.2 Explain the role of quality in customer satisfaction
22.1.3 Explain the role of warranties and guarantees in customer satisfaction
22.1.4 Explain the role of e-commerce usability in customer satisfaction
22.1.5 Explain the use of CRM software in business to consumer operations
22.1.6 Explain the use of CRM software in business to business operations
22.1.7 Explain the link between customer relationships and supply chain management
22.1.8 Explain the importance of all customers to the business

BIL: Essential

EDU:	12	AD
	I	P

Competency 22.2: Provide customer service in an online environment

Competency Builders:

22.2.1 Project a professional image (e.g., appearance, voice, grammar, word usage, enunciation, nonverbal communication) (I)
22.2.2 Interact with customers and colleagues in a professional manner (e.g., prompt, friendly, courteous, respectful, helpful, knowledgeable, clear) (I)
22.2.3 Comply with established business protocols and company policies (I)
22.2.4 Communicate company policies to customers (I)
22.2.5 Facilitate merchandise returns in accordance with customer service policy (I)
22.2.6 Facilitate customer complaints in accordance with customer service policy (I)
22.2.7 Facilitate customer service through the maintenance of key information systems (I)
22.2.8 Follow through on commitments made to customers (e.g., special orders, delivery specifications, new items) (I)
22.2.9 Followup on order problems (I)

22.2.10 Explain current enabling technologies in CRM (I)
22.2.11 Compare CRM software packages and application service provider (ASP)

BIL: Essential

EDU:	12	AD
	P	R

Competency 22.3: Explain the benefits of online customer support

Competency Builders:
22.3.1 Explain the impact of online customer support on customer loyalty
22.3.2 Explain the impact of online customer support on returns
22.3.3 Explain how online customer support reduces negative word-of-mouth
22.3.4 Explain how online customer support systems can reduce the need to personally speak with a customer service representative
22.3.5 Explain how online customer support can reduce support costs
22.3.6 Explain ways to use online customer support inquiries as part of market research
22.3.7 Explain the 80/20 rule of customer support
22.3.8 Explain the correlation between customer retention and acquisition costs

BIL: Essential

EDU:	12	AD
	I	P

Competency 22.4: Manage online customer support activity

Competency Builders:
22.4.1 Use e-mail and e-mail boxes to receive and respond to customers' questions (I)
22.4.2 Create mailbots to respond to common questions
22.4.3 Enable consumer to choose communication vehicle (i.e., call home, work, cell, fax, e-mail)
22.4.4 Follow up with customers (I)
22.4.5 Create Frequently Asked Questions (FAQs) (I)
22.4.6 Keep track of new questions (I)
22.4.7 Use file libraries and archives
22.4.8 Create training materials

22.4.9 Implement enabling response technologies
22.4.10 Operate e-commerce site help desk (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 22.5: Create an online information forum

Competency Builders:
22.5.1 Evaluate how online forums can promote customer relations (I)
22.5.2 Identify the types of information that can be provided (I)
22.5.3 Provide company information
22.5.4 Update frequently
22.5.5 Conduct conferences
22.5.6 Use sales promotion (e.g., free samples, contests) (I)
22.5.7 Conduct surveys (I)
22.5.8 Provide links to complementary sites (I)
22.5.9 Publicize the forum (I)
22.5.10 Enable customer self-service
22.5.11 Discuss the benefits of an extranet (I)

Unit 23: Market Research

BIL: Essential

EDU:	12	AD
	I	P

Competency 23.1: Describe market research

Competency Builders:

23.1.1 Describe market research as both a formal and informal process (I)
23.1.2 Identify common market research activities and the type of information each provides (I)
23.1.3 Explain the role of ethics in marketing research (I)
23.1.4 Differentiate between primary and secondary sources of market research information (I)
23.1.5 Differentiate between qualitative and quantitative sources of market research information (I)
23.1.6 Match primary and secondary sources with their advantages and disadvantages (I)
23.1.7 Differentiate internal from external research and the advantages and disadvantages of each (I)
23.1.8 Explain factors limiting market research (e.g., objectives, level of commitment, resources available) (I)
23.1.9 Identify the steps of market research (I)

BIL: Essential

EDU:	12	AD
	P	R

Competency 23.2: Explain basic market research tools

Competency Builders:

23.2.1 Explain the basics of sampling
23.2.2 Differentiate between data generated from surveys and questionnaires collected over the telephone, by mail, online, and in person
23.2.3 Explain the purpose and types of experiments
23.2.4 Explain the purpose and types of observational research
23.2.5 Explain the purpose and types of focus groups

BIL: Essential

EDU:	12	AD
	I	P

Competency 23.3: Use online market research tools

Competency Builders:

23.3.1 Identify electronic research tools (e.g., e-mail, web surveys, list serves) (I)
23.3.2 Use online market research services
23.3.3 Use methods of conducting online research
23.3.4 Explain the challenges of online surveys (e.g., demographics, psychographics) (I)
23.3.5 Identify online random sampling methods (I)
23.3.6 Explain the use of voluntary research panels (I)
23.3.7 Explain the use of online customer registration in market research
23.3.8 Identify the advantages and disadvantages of requiring online customer registration
23.2.9 Identify the advantages and disadvantages of conducting online market research (I)
23.2.10 Identify the costs associated with online market research (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 23.4: Conduct research

Competency Builders:

23.4.1 Explain target audience (I)
23.4.2 Define research questions (I)
23.4.3 Determine priorities for the information that should be gathered (I)
23.4.4 Identify potential sources of information (I)
23.4.5 Explain target audience/user group as a key information source
23.4.6 Identify subject-matter experts
23.4.7 Evaluate potential sources of information based on established criteria (e.g., affordability, relevance)
23.4.8 Conduct interviews with selected human information sources
23.4.9 Gather information from selected print and electronic sources
23.4.10 Determine the accuracy and completeness of the information gathered

BIL: Recommended

EDU:	12	AD
	I	R

Competency 23.5: Analyze the research process for e-commerce research problems

Competency Builders:

23.5.1 Define the marketing-research problem
23.5.2 Identify research objectives
23.5.3 Identify data sources
23.5.4 Select research approaches
23.5.5 Identify or develop data collection instruments
23.5.6 Develop sampling plan (e.g., who, how many, how chosen)

BIL: Recommended

EDU:	12	AD
	I	R

Competency 23.6: Analyze data

Competency Builders:

23.6.1 Explain the use of databases in organizing marketing research data
23.6.2 Describe the techniques for interpreting marketing research data (i.e., for editing, coding, tabulating raw data, and testing hypotheses)
23.6.3 Describe the creation of internal databases
23.6.4 Describe the nature of basic statistical analysis of data (e.g., dispersion, central tendency, correlation)
23.6.5 Identify statistical packages that can be used to analyze data
23.6.6 Organize incoming information in a database
23.6.7 Identify data/research findings
23.6.8 Perform basic statistical analysis

BIL: Recommended

EDU:	12	AD
	I	R

Competency 23.7: Report marketing research findings

Competency Builders:

23.7.1 Describe the organization of a marketing research report
23.7.2 Explain the presentation of marketing research findings
23.7.3 Prepare final research report
23.7.4 Present findings and recommendations orally

BIL: Recommended

EDU:	12	AD
	I	R

Competency 23.8: Describe process for identifying errors in market research in online and traditional research

Competency Builders:

23.8.1 Describe possible sampling errors
23.8.2 Explain the nature of validity and reliability
23.8.3 Explain the impact of errors on market research
23.8.4 Describe the impact of a faulty problem definition
23.8.5 Describe the impact of a defective population definition
23.8.6 Describe the impact of non-responsive errors
23.8.7 Describe the impact of measurement errors
23.8.8 Describe the impact of poor questionnaire design
23.8.9 Describe the impact of auspices bias
23.8.10 Describe the impact of interviewer-related errors
23.8.11 Describe the impact of data processing errors
23.8.12 Describe the impact of data analysis errors
23.8.13 Describe the impact of interpretation errors

Unit 24: Data Mining

BIL: Essential

EDU:	12	AD
	I	P

Competency 24.1: Explain data mining

Competency Builders:

24.1.1 Define *data mining* (I)
24.1.2 Identify basic tools and techniques of data mining (I)
24.1.3 Explain the use of data mining in Customer Relationship Management (CRM) (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 24.2: Apply ethical behaviors to data mining

Competency Builders:

24.2.1 Define appropriate security measures (I)
24.2.2 Explain the limitations of data mining (I)
24.2.3 Identify ethical uses of data mining (I)
24.2.4 Define use of permanent detail data for legal or ethical purposes

BIL: Essential

EDU:	12	AD
	I	P

Competency 24.3: Use basic data mining techniques in making marketing decisions

Competency Builders:

24.3.1 Identify sources of marketing information accessible through data mining (I)

24.3.2 Select appropriate data (I)

24.3.3 Analyze marketing data (e.g., promotion, site personalization, and product mix) (I)

Unit 25: Data Warehousing

BIL: Recommended

EDU:	12	AD
	I	R

Competency 25.1: Explain basic data warehousing concepts

Competency Builders:

25.1.1 Differentiate between traditional databases and data warehouses
25.1.2 Explain the importance of data warehouses and integration
25.1.3 Explain why information is a competitive resource
25.1.4 Identify components of data warehouses (e.g., subject-oriented, integrated, time-variant, nonvolatile)
25.1.5 Identify the characteristics and uses of metadata
25.1.6 Define types of information (e.g., associations, sequences, classifications, clusters, and forecasting)
25.1.7 Describe data conversion techniques and functions
25.1.8 Identify types of programs and applications for data warehousing
25.1.9 Define *public summary data*
25.1.10 Describe ethical issues of data warehousing

BIL: Recommended

EDU:	12	AD
	I	R

Competency 25.2: Apply ethical behavior to data warehousing

Competency Builders:

25.2.1 Define appropriate security measures
25.2.2 Analyze the limitations of external data
25.2.3 Identify ethical uses of data
25.2.4 Define use of permanent detail data for legal or ethical purposes

BIL: Recommended

EDU:	12	AD
		I

Competency 25.3: Perform data retrieval

Competency Builders:

25.3.1 Locate appropriate data warehouses
25.3.2 Perform strategic analyses using a multidimensional database
25.3.3 Secure necessary indices
25.3.4 Design reasonable query
25.3.5 Define nature of application
25.3.6 Apply appropriate security measures
25.3.7 Obtain necessary responses from data query
25.3.8 Calculate derived and aggregate data
25.3.9 Validate the processing of data
25.3.10 Optimize query procedures
25.3.11 Evaluate information gathered in query
25.3.12 Utilize public summary data
25.3.13 Design reporting medium
25.3.14 Perform online analytical processing
25.3.15 Construct report from data gathered

Unit 26: Marketing Management

BIL: Essential

EDU:	12	AD
	P	R

Competency 26.1: Explain the role of marketing management

Competency Builders:

26.1.1 Describe the role of the marketing manager
26.1.2 Identify challenges faced by marketing management
26.1.3 Explain strategic marketing planning
26.1.4 Explain the nature of marketing audits
26.1.5 Explain critical aspects of business image
26.1.6 Explain the marketing planning process
26.1.7 Explain the role of special customer services
26.1.8 Explain management's role in customer relations

BIL: Essential

EDU:	12	AD
	P	R

Competency 26.2: Describe marketing information management

Competency Builders:

26.2.1 Describe the need for a comprehensive information management system for managing marketing systems
26.2.2 Identify internal sources of marketing information
26.2.3 Identify external sources of marketing information
26.2.4 Create new sources of marketing information as needed
26.2.5 Explain the importance of credibility and objectivity in marketing information management
26.2.6 Describe ethical issues in information management
26.2.7 Define *environmental scanning*

BIL: Essential

EDU:	12	AD
	I	P

Competency 26.3: Make marketing decisions

Competency Builders:

26.3.1 Identify the marketing decision/problem (e.g., recognize problem exists, search for underlying cause, define problem, refine problem, classify problem, define additional goals) (I)
26.3.2 Develop alternative responses to decisions/problems (I)
26.3.3 Establish criteria for evaluating alternative responses to decisions/problems (I)
26.3.4 Project outcomes of alternatives to decisions/problems (I)
26.3.5 Implement financial analysis techniques to make marketing decisions
26.3.6 Implement non-financial analysis techniques to make marketing decisions

BIL: Essential

EDU:	12	AD
	P	R

Competency 26.4: Explain market segmentation and targeting

Competency Builders:

26.4.1 Explain the differences between mass marketing and market segmentation
26.4.2 Explain the importance of target marketing
26.4.3 Describe levels of segmentation
26.4.4 Identify reasons to segment
26.4.5 Identify descriptor variables for consumer markets
26.4.6 Identify descriptor variables for business markets
26.4.7 Explain how to determine which segments to target
26.4.8 Explain how the Internet affects the concepts of segmentation and niche marketing
26.4.9 Explain the uses of psychographic in segmentation
26.4.10 Explain the uses of demographics in segmentation
26.4.11 Explain the use of behavioral variables in segmentation
26.4.12 Explain technographics in segmentation (i.e., computer ownership, computer knowledge, Internet knowledge)
26.4.13 Explain segmentation schemes used for organizational buyers
26.4.14 Explain marketing mix strategies used to target market segments

26.4.15 Explain use of commerce statistics and data mining in segmentation
26.4.16 Explain geographic segmentation

BIL: Essential

EDU:	12	AD
	P	R

Competency 26.5: Explain how different environments affect marketing strategies

Competency Builders:
26.5.1 Identify the main types of competitive markets
26.5.2 Identify marketing strategies for competitive markets
26.5.3 Identify the legal and political environments that affect marketing strategies
26.5.4 Identify federal legislation protecting competition
26.5.5 Identify major federal food and drug legislation affecting marketing strategies
26.5.6 Explain the social environments that affect marketing (i.e., consumerism, product quality, market information, pollution, special interest consumer groups)
26.5.7 Explain the ethical issues that affect marketing strategies
26.5.8 Explain how the economic environment affects marketing strategies
26.5.9 Explain how technology affects marketing strategies

BIL: Essential

EDU:	12	AD
	P	R

Competency 26.6: Develop a basic marketing plan for e-commerce

Competency Builders:
26.6.1 Identify the potential uses of a marketing plan
26.6.2 Identify the organization's mission
26.6.3 Complete a basic SWOT (strengths, weaknesses, opportunities, threats) analysis
26.6.4 Identify overall marketing objectives
26.6.5 Select target markets
26.6.6 Use marketing research as needed
26.6.7 Develop objectives for each target market
26.6.8 Develop marketing mix strategies

26.6.9 Develop tactics (i.e., action plan)
26.6.10 Develop a budget

BIL: Essential

EDU:	12	AD
	I	P

Competency 26.7: Develop a comprehensive marketing plan for e-commerce

Competency Builders:

26.7.1 Identify the organization's mission (I)
26.7.2 Determine organizational resources
26.7.3 Complete a comprehensive SWOT (strengths, weaknesses, opportunities, threats) analysis (I)
26.7.4 Identify overall marketing objectives (I)
26.7.5 Select target markets (I)
26.7.6 Use marketing research as needed (I)
26.7.7 Develop objectives for each target market (I)
26.7.8 Develop marketing mix strategies (I)
26.7.9 Develop tactics (i.e., action plan) (I)
26.7.10 Develop a budget (I)
26.7.11 Implement the marketing plan
26.7.12 Evaluate the marketing plan using milestones and benchmarks
26.7.13 Revise the marketing plan

Unit 27: Business Management and Entrepreneurship

BIL: Essential

EDU:	12	AD
	I	P

Competency 27.1: Describe management concepts

Competency Builders:

27.1.1 Identify the major functions and activities of management (I)
27.1.2 Describe management styles (I)
27.1.3 Explain the role of authority, accountability, and responsibility, and responsibility in task accomplishment (I)
27.1.4 Describe current and emerging management trends
27.1.5 Identify the major functions of management
27.1.6 Explain the importance of strategic planning (I)
27.1.7 Identify the risks/rewards associated with on-line business (I)
27.1.8 Describe methods to manage risks (I)

BIL: Recommended

EDU:	12	AD
		I

Competency 27.2: Describe quality programs

Competency Builders:

27.2.1 Explain current and emerging quality programs
27.2.2 Define quality management terminology
27.2.3 Identify the role of quality within an organization
27.2.4 Identify the process of quality planning
27.2.5 Describe quality tools
27.2.6 Model quality assurance programs

BIL: Essential

EDU:	12	AD
	I	P

Competency 27.3: Manage project methodologies

Competency Builders:

27.3.1 Define the project's contribution to business needs (I)
27.3.2 Define the scope of the project (I)
27.3.3 Identify escalation procedures
27.3.4 Develop task list (i.e., work breakdown structures) (I)
27.3.5 Evaluate project requirements (I)
27.3.6 Identify required resources and budget (I)
27.3.7 Estimate time requirements (I)
27.3.8 Develop initial project management flowchart (I)
27.3.9 Identify interdependencies
27.3.10 Identify critical milestones (I)
27.3.11 Evaluate risks
27.3.12 Track critical milestones
27.3.13 Participate in project phase review
27.3.14 Report project status (I)
27.3.15 Utilize project management software

BIL: Essential

EDU:	12	AD
	P	R

Competency 27.4: Build interpersonal skills with individuals and teams

Competency Builders:

27.4.1 Analyze the interdependence of empathetic listening, synergy, and consensus building
27.4.2 Define roles within the group decision-making process (e.g., consensus)
27.4.3 Apply knowledge of group dynamics
27.4.4 Promote teamwork, leadership, and empowerment
27.4.5 Identify strategies for fostering creativity
27.4.6 Recognize the effect of influence, power, and politics on communication
27.4.7 Identify negotiation techniques
27.4.8 Describe the phases of team building

BIL: Recommended

EDU:	12	AD
	I	R

Competency 27.5: Provide leadership to employees

Competency Builders:

27.5.1 Orient new employees
27.5.2 Train employees
27.5.3 Participate in appraisal process
27.5.4 Compare/contrast different leadership styles
27.5.5 Identify the factors that influence choice of leadership style in a given situation
27.5.6 Delegate responsibilities
27.5.7 Identify ways to build employee morale
27.5.8 Identify ways to motivate employees
27.5.9 Explain how communication can influence employee motivation
27.5.10 Describe the reasons for involving employees in decision-making
27.5.11 Supervise employees

BIL: Essential

EDU:	12	AD
	I	P

Competency 27.6: Describe role of small business in the e-commerce economy

Competency Builders:

27.6.1 Describe the relationship of small business to a national (USA) and global economy (I)
27.6.2 Identify factors that contribute to the success and failure of small business (I)
27.6.3 Explain the effects of supply, demand, profit, and competition on small business (I)
27.6.4 Explain the differences in marketing strategy between small and large businesses (I)
27.6.5 Identify qualities and skills needed by small business owners (I)
27.6.6 Identify the advantages and disadvantages of owning a small business (I)
27.6.7 Identify the personal risks of owning a small business (I)

BIL: Recommended

EDU:	12	AD
	I	R

Competency 27.7: Examine entrepreneurship

Competency Builders:

27.7.1 Evaluate personal interests and skills
27.7.2 Compare personal interests and skills with those needed by an entrepreneur
27.7.3 Assess abilities and aptitudes to become a successful entrepreneur
27.7.4 Determine motives for becoming an entrepreneur
27.7.5 Examine characteristics of entrepreneurs
27.7.6 Compare business ownership to working for others

Unit 28: Financial Management Functions

BIL: Essential

EDU:	12	AD
	P	R

Competency 28.1: Explain the nature and scope of financing

Competency Builders:

28.1.1 Describe the importance of financing to a business
28.1.2 Describe the relationship between financing and marketing
28.1.3 Explain the critical nature of banking relationships
28.1.4 Explain the purposes and importance of obtaining business financing
28.1.5 Describe sources of financing for businesses
28.1.6 Describe electronic financial services

BIL: Essential

EDU:	12	AD
	P	R

Competency 28.2: Explain basic accounting concepts and principles

Competency Builders:

28.2.1 Demonstrate knowledge of basic accounting principles and applications
28.2.2 Explain accounting terminology
28.2.3 Explain financial control procedures
28.2.4 Describe record-keeping procedures for specific business and economic applications
28.2.5 Explain periodic reporting procedures

BIL: Essential

EDU:	12	AD
	I	P

Competency 28.3: Perform basic financial transactions

Competency Builders:

28.3.1 Analyze basic transactions (I)
28.3.2 Record transactions (I)
28.3.3 Monitor expense accounts (I)
28.3.4 Prepare budgets (I)
28.3.5 Process purchases (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 28.4: Prepare basic financial statements

Competency Builders:

28.4.1 Prepare balance sheets (I)
28.4.2 Prepare income statements (I)
28.4.3 Prepare cash-flow statements (I)
28.4.4 Prepare change-in-equity statements (I)
28.4.5 Prepare forecasts (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 28.5: Analyze financial performance

Competency Builders:

28.5.1 Interpret balance sheets (I)
28.5.2 Interpret income statements (I)
28.5.3 Perform cash-flow analyses
28.5.4 Prepare break-even analyses
28.5.5 Prepare budgets
28.5.6 Prepare comparative financial statements
28.5.7 Prepare cost and revenue analyses

BIL: Essential

EDU:	12	AD
	I	P

Competency 28.6: Explain costs associated with creating and maintaining an e-commerce site

Competency Builders:

28.6.1 Examine costs to own/run a server (I)
28.6.2 Examine costs to use an Internet Service Provider (ISP) (I)
28.6.3 Examine costs related to e-commerce (e.g., site design, maintenance, and support) (I)
28.6.4 Explain costs to interface with existing databases, order systems, and accounting systems
28.6.5 Explain profitability of e-commerce site (I)
28.6.6 Explain the financial implications of outsourcing vs. internal development

BIL: Recommended

EDU:	12	AD
		1

Competency 28.7: Use financial statements to make business decisions

Competency Builders:

28.7.1 Prepare budgets based on cost and revenue analyses
28.7.2 Calculate profitability ratios from financial statements
28.7.3 Interpret cash-flow analysis statements
28.7.4 Document the impact of financial analysis on the strategic planning process
28.7.5 Revise short-term and long-term strategic plans based on financial analyses
28.7.6 Interpret balance sheet
28.7.7 Interpret income statements
28.7.8 Interpret break-even analyses
28.7.9 Prepare comparative financial statements
28.7.10 Prepare cost and revenue analyses

Unit 29: E-Commerce/Business Law, Ethics and Legal Issues

BIL: Essential

EDU:	12	AD
	I	P

Competency 29.1: Describe e-commerce/business law, ethics and legal issues

Competency Builders:

29.1.1 Identify major types of laws (I)
29.1.2 Differentiate between crimes and torts (e.g., terminology, conceptual development) (I)
29.1.3 Differentiate between criminal and civil law (I)
29.1.4 Differentiate between state and federal court systems (I)
29.1.5 Describe the court system procedural process (e.g., how a case goes to trial) (I)
29.1.6 Determine the practical implications of lawsuits in terms of good will, client relations, the bottom line, diversion of company resources, cash flow and accounts receivable (I)
29.1.7 Explain basic business law concepts (I)
29.1.8 Relate current laws and regulations to company contracts, policies, and procedures
29.1.9 Define legal terminology
29.1.10 Describe procedures for maintaining the confidentiality of client information

BIL: Essential

EDU:	12	AD
	I	P

Competency 29.2: Identify key elements of contract law for e-commerce

Competency Builders:

29.2.1 Describe the key characteristics of contracts and/or legal documents (I)
29.2.2 Identify the elements of a contract for validity (i.e., offer, acceptance, considerations, and subject matter) (I)
29.2.3 Differentiate between types of contracts (e.g., oral, written, implied) (I)
29.2.4 Differentiate between transferable and nontransferable contracts
29.2.5 Identify means of discharging contracts (i.e., substantial vs. specific performance)

29.2.6 Identify remedies available for a breach of contract (i.e., legal and nonlegal)
29.2.7 Explain the legal issues associated with digital signatures

BIL: Essential

EDU:	12	AD
	I	P

Competency 29.3: Describe intellectual property rights covered by intellectual law in e-commerce

Competency Builders:

29.3.1 Describe the various forms of intellectual property rights (e.g., copyright, patent, trademark, trade secrets) (I)
29.3.2 Define *plagiarism, authorship, work made for hire, fair use* (I)
29.3.3 Describe court cases related to intellectual property rights (I)
29.3.4 Describe First Amendment rights in e-commerce (I)
29.3.5 Describe software licensing issues
29.3.6 Explain how to obtain a copyright (I)
29.3.7 Describe how to obtain a patent (I)
29.3.8 Explain how to obtain a trademark (I)
29.3.9 Identify the perils in acquiring content rights
29.3.10 Identify the rights granted under copyright, patent, and trademark
29.3.11 Identify the rights related to electronic imagery
29.3.12 Identify the liability for copyright infringement
29.3.13 Identify the liability for invasion of privacy
29.3.14 Identify the liability for slander and libel
29.3.15 Describe confidentiality issues and their liability implications
29.3.16 Explain the characteristics of warranties (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 29.4: Describe social, ethical, and legal issues in e-commerce

Competency Builders:

29.4.1 Explain the social implications of decisions made and actions taken as an e-commerce professional (I)
29.4.2 Explain the ethical issues that face e-commerce professionals (I)
29.4.3 Describe the legal issues that face e-commerce professionals (I)
29.4.4 Explain the legal use of digital signatures for electronic contracting
29.4.5 Explain shrink-wrap/point-and-click agreements
29.4.6 Explain the Electronic Funds Transfer Act and its application to online payments
29.4.7 Explain court jurisdictional issues related to e-commerce
29.4.8 Explain legal and ethical issues related to consumer privacy
29.4.9 Explain consumer protection law (I)
29.4.10 Describe regulation of advertising (I)
29.4.11 Describe the nature of selling regulations
29.4.12 Describe ethics in selling (I)
29.4.13 Explain the scope of competition regulations (I)
29.4.14 Explain trade-secret regulations
29.4.15 Explain trade/business secret ethics
29.4.16 Describe ethics in providing misleading information
29.4.17 Explain legal considerations for granting credit
29.4.18 Explain legal consideration for pricing
29.4.19 Describe ethics in pricing (I)
29.4.20 Describe the role of ethics in advertising (I)
29.4.21 Describe the role of commerce agencies (I)
29.4.22 Explain how the Communications Decency Act applies to e-commerce issues
29.4.23 Identify developing ethical and legal issues in e-commerce
29.4.24 Describe legal issues in transportation
29.4.25 Describe legal issues in warehousing
29.4.26 Describe product liability and issues
29.4.27 Describe labor law as it relates to e-commerce

Unit 30: Writing and Documentation for Marketing

BIL: Essential

EDU:	12	AD
	I	P

Competency 30.1: Assess report writing requirements

Competency Builders:

30.1.1 Define/prioritize communication needs (I)
30.1.2 Resolve conflicting requirements (I)
30.1.3 Specify project objectives (I)
30.1.4 Determine the size and specifics of the work to be completed (I)
30.1.5 Estimate time, materials, and capabilities needed to complete assignment (I)
30.1.6 Identify criteria for successful completion of project (I)
30.1.7 Evaluate strengths, weaknesses, opportunities, and threats (S.W.O.T.) of completed project (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 30.2: Write reports

Competency Builders:

30.2.1 Determine audience (I)
30.2.2 Access needed information using standard references and sources (I)
30.2.3 Identify type of report needed (I)
30.2.4 Compile relevant data (I)
30.2.5 Organize data into charts and graphs (I)
30.2.6 Analyze data (I)
30.2.7 Draw conclusions from data analysis (I)
30.2.8 Outline report (I)
30.2.9 Draft report (I)
30.2.10 Edit report (e.g., check spelling, grammar, punctuation, sentence structure, accuracy of content) (I)
30.2.11 Review report with peers (I)
30.2.12 Revise report as needed based on peer feedback (I)

30.2.13 Proofread revised report (I)
30.2.14 Present reports (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 30.3: Design documentation

Competency Builders:
30.3.1 Define purpose of documentation (I)
30.3.2 Specify standards for documentation, including critical success criteria (I)
30.3.3 Identify delivery options (I)
30.3.4 Evaluate cost-effectiveness of each delivery option (I)
30.3.5 Select tools appropriate for task purpose (I)
30.3.6 Plan information flow (I)
30.3.7 Select writing style and tone appropriate for given documentation (I)
30.3.8 Determine level of detail needed (I)
30.3.9 Identify visuals appropriate for given documentation (I)
30.3.10 Provide feedback on design to development team/individual (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 30.4: Develop documentation

Competency Builders:
30.4.1 Determine audience (I)
30.4.2 Identify parameters (I)
30.4.3 Monitor development progress (I)
30.4.4 Ask questions (I)
30.4.5 Interpret specifications or drawings for target audience (I)
30.4.6 Record process (e.g., flowchart, step-by-step narrative)
30.4.7 Record data (I)
30.4.8 Maintain test logs
30.4.9 Compile cumulative reference/record (I)

30.4.10 Measure compliance with established parameters
30.4.11 Verify the accuracy and validity of the information
30.4.12 Select information relevant to and appropriate for the given documentation
30.4.13 Organize/synthesize information
30.4.14 Present content in clear and concise way (I)
30.4.15 Translate technical terminology into terms understandable by audience
30.4.16 Employ presentation tools and techniques appropriate for the given documentation
30.4.17 Obtain feedback on the information provided and its technical accuracy
30.4.18 Draft procedures
30.4.19 Test documentation for usability
30.4.20 Edit documentation for readability, grammar, and usage
30.4.21 Publish documentation (I)
30.4.22 Maintain required logs

BIL: Essential

EDU:	12	AD
	I	P

Competency 30.5: Perform writing to sell

Competency Builders:
30.5.1 Identify key sales words (I)
30.5.2 Demonstrate effective writing for the Internet (I)
30.5.3 Identify writing strategies for direct marketing
30.5.4 Write a sales letter (I)
30.5.5 Respond to customer inquiries (I)
30.5.6 Demonstrate effective copywriting techniques with words that sell
30.5.7 Write articles for an e-zine
30.5.8 Write product descriptions
30.5.9 Identify features and benefits of a product or service

Unit 31: Digital Marketplace Design

BIL: Essential

EDU:	12	AD
	P	R

Competency 31.1: Explain the digital marketplace

Competency Builder:

31.1.1 Identify types of businesses most likely to succeed online
31.1.2 Identify the requirements for success in creating an e-commerce site
31.1.3 Identify different ways an e-commerce site can be used to develop and enhance customer relationships to encourage repeat business and brand loyalty
31.1.4 Identify the range of costs associated with developing an e-commerce site
31.1.5 Identify differences between implementing an e-commerce site with an off-the-shelf software package vs. freeware CGI solutions
31.1.6 Identify security and payment processing issues involved in developing a site (e.g., SSL, Digital Certificates, SET Protocol, Cyber Cash)

BIL: Essential

EDU:	12	AD
	I	P

Competency 31.2: Explain the basic principles of user friendly websites

Competency Builders:

31.2.1 Explain the purpose of user friendly websites (I)
31.2.2 Explain the range of user issues involved in determining any technology's human and organizational acceptability
31.2.3 Explain the theoretical and empirical nature of user-centered design processes
31.2.4 Describe the variety of user-centered inputs to the design process (I)
31.2.5 Explain why the website design is critical to the success of an e-commerce venture (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 31.3: Apply user interface principles to e-commerce site design

Competency Builders:

31.3.1 Identify tools and techniques for determining user group's goals, capabilities and expectations (I)
31.3.2 Determine user decision making during navigation (I)
31.3.3 Conduct task performance time tests (I)
31.3.4 Conduct quality of outcome tests (I)
31.3.5 Conduct subjective satisfaction surveys (I)
31.3.6 Develop valid and reliable usability evaluation plans
31.3.7 Determine frequency of usage errors
31.3.8 Determine learning times of various user groups
31.3.9 Determine ways to incorporate simple and expert mode in an e-commerce site
31.3.10 Design a conscious conceptual model
31.3.11 Identify ways to minimize the cognitive, visual and motor demands on users
31.3.12 Evaluate site for consistency (e.g., from screen to screen, between applications, with industry standards) (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 31.4: Determine elements to include in a digital marketplace

Competency Builders:

31.4.1 Determine business goals for site (I)
31.4.2 Identify target audience (I)
31.4.3 Determine product assortment (I)
31.4.4 Evaluate on-line catalog implementation methodologies (I)
31.4.5 Determine shipping options (I)
31.4.6 Determine customer service options (e.g., e-mail, phone, fax, etc.) (I)
31.4.7 Determine the terms and conditions of sale, including warranties, after-sales service, and privacy assurances (I)
31.4.8 Determine pricing strategy v

31.4.9 Determine payment options that comply with legal regulations regarding sales taxes (I)
31.4.10 Determine whether to offer response incentives (I)
31.4.11 Determine what type of response incentives to offer (I)
31.4.12 Meet company standards (I)
31.4.13 Predict impact on business systems (I)
31.4.14 Develop site personality (create useful customer content) (I)

BIL: Essential

EDU:	12	AD
	I	P

Competency 31.5: Design a digital marketplace

Competency Builders:
31.5.1 Research site development methodology (I)
31.5.2 Develop a flow diagram of user site decisions (I)
31.5.3 Assign pages according to flow diagram (I)
31.5.4 Develop a storyboard for pages showing placement of images, text, and buttons/navigational graphics to reflect user decision-making process (I)
31.5.5 Design menu system and/or links
31.5.6 Design home page that provides a graphic site map (I)
31.5.7 Draw attention to key decisions using design elements and principles
31.5.8 Determine product/service display techniques
31.5.9 Design on-line catalog
31.5.10 Design shopping cart system that allows customers to start shopping on the home page and select multiple items for purchase
31.5.11 Facilitate ease of use (e.g., download time, on-screen visibility, etc.)
31.5.12 Write copy that appeals to target audience (I)
31.5.13 Facilitate buying decision

BIL: Essential

EDU:	12	AD
		P

Competency 31.6: Implement the digital marketplace

Competency Builders:

31.6.1 Select hosting company based on set criteria
31.6.2 Test site with different browsers
31.6.3 Register site with various search engines/portals
31.6.4 Revise design to reflect user feedback

BIL: Essential

EDU:	12	AD
		P

Competency 31.7: Evaluate the digital marketplace

Competency Builders:

31.7.1 Determine site profitability over time
31.7.2 Assess impact of the site on costs
31.7.3 Determine if the site increases quality of customer service
31.7.4 Determine if site builds brand
31.7.5 Determine if site improves business image